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REDUCING MEAT CONSUMPTION: DRAWING ON PARTICIPATORY ACTION
RESEARCH TO EXPLORE WAYS OF ENGAGING IN A PROCESS OF MEAT
CONSUMPTION REDUCTION

by

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THESIS

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Abstract

With growing attention to climate change and human impacts on the environment, an emerging body of literature is exploring the impacts of global reliance on meat consumption. Research is increasingly supporting the feasibility of reducing meat consumption to address the environmental pressures of the global food system. However, recommended strategies to promote a reduction in meat consumption have been limited due to narrowly focusing on individual rational decision-making models. Centralizing a Social Practice theoretical lens, the present study utilized an approach to participatory action research to explore the experiences of seven ($N = 7$) green-building tenants reducing their meat consumption through a series of six weekly peer group and participant-driven meetings in the workplace. Thematic analysis of pre- and post-surveys, the meetings and a follow-up focus group illuminate the supportive role that peer support groups have for engaging in an individual reduction in meat consumption. Aspects of the participatory peer group that contributed most to engagement in the meat reduction process are discussed.

Keywords: engagement, sustainability, meat consumption, peer support, participatory action research

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Preface

Leading up to, and in the wake of, events calling on significant global participation in political, social and environmental activism, such as the recent Global Climate Strike, growing attention is being drawn to global climate change (GCC) and human impacts on the environment in both community and academic spheres. More recently, the food system has been spotlighted as one of the drivers of these impacts and reducing individual meat consumption as a feasible climate action solution. This research is dually driven by the ever-present need to engage communities in environmental action and informed by my own experiences with giving up meat consumption for health, ethical and environmental reasons. When engaging in scientific inquiry, it's important to reflect on and acknowledge my position in the research process, and how my experiences and values shape both the process and outcome of the research.

Spending my early years on my grandparents' farm in rural northern Ontario, I developed a strong connection to the land and animals. This early experience undoubtedly influenced my understanding of the food system and how I fit within it alongside the plants and animals that I eat, which subsequently influenced a lifelong transition to vegetarianism. I describe this as lifelong as this was not a clear cut or black and white change from one lifestyle to another. I faced many barriers to pursuing a meat-free lifestyle: being part of a northern Ontario family of Italian descent with strong connections to the consumption of meat and unwilling to accommodate my needs due to their own perceived health concern biases, perceived inconvenience of providing 'special' meals, perceived expensiveness, and the ideology that I must eat meat because it's healthy, natural and normal. Despite overcoming these barriers in my childhood and adolescence, I then faced many barriers in my young adulthood as soon as I was able to control the food I consume: misinformation about nutrition; accessibility to healthy and

affordable food options in grocery stores, restaurants, and the food service providers on my university campus; pressure to eat meat or questioning of my choices from others in a negative overtone; and unwillingness by family and social networks to accommodate my ‘alternative’ dietary needs. Despite my strong environmental, ethical and health motivations, my experience with reducing meat consumption to the point of no longer consuming meat was a long and complex process, influenced by many factors outside of my own individual choice that both facilitated and hindered my ability to undergo this change. With years of wavering ability and conscious effort, I’ve taken action for the environment by reducing my own meat consumption despite the many barriers in the way. With that being said, if reducing individual meat consumption is going to be an evidence-based solution to mitigate climate impacts, I think it’s important to further contextually understand the process of reducing meat consumption in order to fully understand the feasibility of it as a promising climate mitigation solution.

Reducing Meat Consumption: Drawing on Participatory Action Research to Explore Ways of Engaging in a Process of Meat Consumption Reduction

An emerging body of scientific literature is exploring the impacts of the dominant food system, global meat consumption and production practices, and its significant contribution to the degradation of the environment (Gifford & Chen, 2017; Frenette et al., 2017; Hartmann & Siegrist, 2017; Stoll-Kleeman & Schmidt, 2017; Laestadius et al., 2016; Stehfast et al., 2009). Research is increasingly supporting the feasibility of reducing meat consumption (RMC) to address the environmental pressures of the global food system (for example, see Willett et al., 2019; Springmann et al., 2018a; Springmann et al., 2018b). Such advancement in evidence-based solutions is crucial to creating the change necessary to mitigate some of the environmental impacts of the food system. However, recommended strategies to promote a reduction in meat consumption have been limited. To address this, a research project took place to explore an alternative approach to encouraging a reduction in meat consumption.

In the next section, the relevant literature will be reviewed. Following this, the methods and results of the present study will be outlined. Relevance of the findings will then be discussed, and implications of the research outlined.

Literature Review

Understanding Meat Consumption

To understand the increasing environmental impacts of the food system, it's important to first understand consumption practices and the factors that have contributed to it. To facilitate this, this section will explore meat consumption practices through two lenses: Bronfenbrenner's (1979) ecological model and Social Practice Theory (SPT; Shove & Pantzar, 2005). The ecological model will provide the organizational framework for understanding factors that

influence meat consumption at various system levels that the individual is embedded in. In alignment with this model, SPT provides a conceptual framework for understanding meat consumption.

An ecological analysis of meat consumption. In this next section, meat consumption will be analyzed using Bronfenbrenner's (1979) ecological model. Bronfenbrenner's model emphasizes the interrelationship of various contextual factors that influence developmental processes. The interrelated contextual factors that influence meat consumption will be explored at the individual, micro-, exo-, and macro-levels of the ecological system.

Individual level. The individual level encompasses personal factors, such as age, gender, psychological characteristics, etc. (Bronfenbrenner, 1979). Central to examining meat consumption practices at this level is the study of individual consumer choice and the factors that influence meat consumption behaviours. In a review of studies exploring factors related to meat consumption practices (e.g. motivations, barriers, demographic characteristics, etc.) in USA, UK, Canadian, Australian and New Zealand contexts, Ruby (2012) found that women are more likely to reduce their meat consumption, and that men are not only less likely than women but are also resistant to the notion of reducing their meat consumption. In addition to these demographic factors, age, income, and level of education are all positively correlated with preference for less meat consumption (Ruby, 2012).

Previous literature has also largely focused on the social and cognitive psychological processes at the individual level, such as values, attitudes, intentions, beliefs, knowledge, habits, etc., as being prerequisites for engaging in sustainable consumption behaviours (Graça, 2016; Ruby, 2012; Zur & Klöckner, 2012). For example, people with a stronger altruistic value orientation, such as universalism (e.g. concern for the welfare of all), are more likely to reduce

their meat consumption or engage in more sustainable food consumption (de Boer, Hoogland, & Boersema, 2007; Graham & Abrahamse, 2017). Whereas those with values leaning more toward hierarchical domination and social power are more likely to be meat eaters (Allen, Wilson, Ng, & Dunne, 2000; Graham & Abrahamse, 2017). Moreover, strong attitudes toward meat have been found to predict willingness and intentions to reduce consumption (Lentz et al., 2018; Zur & Klöckner, 2012). Research grounded in cognitive dissonance theory (Piazza et al., 2015) suggests that there are “4Ns” that rationalize meat consumption, which are founded on the belief that meat is natural, normal, necessary, and nice (enjoyable). These beliefs perpetuate meat consumption practices. Moreover, examining factors that influence meat consumption at the personal level, Stoll-Kleemann & Schmidt (2017) state, “knowledge and skills are preconditions for determining behaviour” (p.1265). Previous research has largely centered on the acquisition of factual knowledge in determining meat consumption or reduction practices; however, the authors add that procedural knowledge, or knowledge of action strategies, are also highly influential factors. For example, someone may factually know that a plant-based dish is perhaps a more sustainable meal option but may not have the procedural knowledge of how to cook the dish. The individual-level factors discussed thus far have been primarily social and cognitive psychological factors, and although exploration of phenomena related to meat consumption has primarily centered on these factors, research has found that the most influential factor or predictor of meat consumption is actually habits related to consumption practices (Zur & Klöckner, 2012). This points to more automatic and less conscious processes largely influencing meat consumption practices than what research in this area has typically centred on.

Micro-level. The microsystem encompasses the immediate social systems like family, friends, school, work, that the individual is part of (Bronfenbrenner, 1979). At the interpersonal

level, these social systems have a major influence on meat consumption practices. While current literature has centred on understanding deliberative individual meat consumption behaviours, as Delormier and colleagues (2009) state, individual “behaviours” do not actually occur separately from the social context. As social beings, our eating practices often form in relation to other people, and in conjunction with day-to-day life activities that occur in family, work and school settings. As such, the social context in which we are embedded largely shapes our meat consumption practices (Delormier et al., 2009). Factors such as social meat-eating habits, social norms around meat and social pressures to eat meat (Gifford & Chen, 2017) occur in a variety of social settings that an individual is embedded in, such as family networks, social networks, school settings and work settings (Ruby, 2012). In their review of studies exploring vegetarianism, Ruby (2012) noted that family dietary habits and pressures by others were among the most significant perceived barriers imposed on individuals considering reducing their meat consumption. Conversely, social support was deemed one of the most critical factors in being able to maintain a meatless lifestyle (Ruby, 2012), pointing to the social sphere as having a significant influence on both upholding and abandoning traditional meat consumption practices.

Exo-level. The exosystem encompasses a broader set of institutions that an individual is embedded in, such as communities, media, politics, industry, services, etc. (Bronfenbrenner, 1979). Most importantly however, at this level is the food system. Industrial agriculture began dominating the food system when the boom of the newly over-productive industrial era increased productivity of the agricultural sector, thus increasing demands for more widely available meat products (de Boer, Schösler & Boersema, 2013). This led to meat becoming society’s main protein source and central component of the typical meal structure, a practice and ideology that has persisted through the years and remains today (Lentz et al., 2017). Because of this boom, not

only does valuing meat dominate ideologies, but industrial agriculture processes dominate local and national economies and food availability (Stoll-Kleeman & Schmidt, 2017).

The food environment embedded within communities is a significant influential factor when it comes to meat consumption practices. It includes the types of food, food sources, and the availability, accessibility (Stoll-Kleeman & Schmidt, 2017), and affordability of food (Ruby, 2012). The products that dominates the food environment are evidently a highly influential factor when it comes to consumption and the ability to uphold or abandon traditional meat consumption practices. Moreover, critical political economists argue that the producers, processors, and marketers of the meat industry carry cultural hegemony—control over the values and beliefs in Western society (Gossard & York, 2003). According to Gossard and York (2003), a continued increase in meat consumption can be attributed, at least in part, to the economic elite's influence over consumer preferences through social, psychological, and cultural manipulation, such as through means of extensive meat marketing and advertising, consequently shaping the values and beliefs of consumers towards conceptualizing meat consumption as essential to human functioning. This belief system leads to consuming more meat products, and demanding more products to be produced, perpetuating the consumer demand cycle (Gossard & York, 2003). Moreover, the price of meat products today relative to average income for a significant proportion of the global population is less than it ever has been (Godfray et al., 2018), making it that much more accessible as a food source to dominate meal structure. Local culture favouring the meat industry and resulting media manipulation (Gossard & York, 2003), lack of environmental resources, such as the accessibility, availability, and affordability of alternative options (Ruby, 2012), and increased affordability of meat products (Godfray et al., 2018) all significantly impact an individual's meat consumption. An individual may possess the necessary

knowledge and awareness, environmental beliefs, or even change their habitual practices, but if the surrounding environment does not support a particular lifestyle, an individual may not even contemplate changing their lifestyle, let alone feel they have the capacity to do so—referred to by Bandura (1977) as an efficacy expectation, or “the belief that one can successfully execute the behaviour required to produce the outcomes” (p. 193).

An individual may also be bound by their location of residence and social class (Gossard and York, 2003). In their study examining the social structural influences on meat consumption, Gossard and York (2003) found that social class and location of residence uniquely influence meat-eating habits in the United States. Specifically, the authors found that those in “working class” positions eat substantially more meat than those with a higher level of education, people living in Midwestern regions eat significantly more meat than people in other regions, and urban dwellers eat less beef than non-urban residents. According to the authors, these findings support the argument that meat consumption is not biologically necessary or at the mercy of rational decision-making but is instead a practice embedded in the web of normative and environmental resource influences (Gossard & York, 2003).

Macro-level. The macro-level encompasses a broader system of ideologies, beliefs, attitudes, norms, and culture that transcend and influence the other system levels in which an individual is embedded (Bronfenbrenner, 1979). When critically examining meat consumption from this broader socio-cultural level, it’s clear how these powerful and largely unseen forces have influenced meat consumption as a dominant consumption practice that still exists today.

It is well noted by researchers that meat holds utmost cultural importance when it comes to dominant consumption practices (Lentz et al., 2018; Macdiarmid et al., 2016; Stoll-Kleeman & Schmidt, 2017). This cultural importance expresses itself through a variety of socio-cultural

norms governing consumption practices, such as the structuring of meals centering around meat (de Boer et al., 2014), and conceptions of nutrition and cooking, to the point where meat-eating has become routine and traditional (Lentz et al., 2018). This is also expressed through the gendered differences in consumption practices. For example, strong meat-eating norms and beliefs can act as barriers to changing consumption practices, as they can deter people from diverging from socially acceptable food practices out of fear for social disapproval (Stoll-Kleeman & Schmidt, 2017). This phenomenon has been widely studied related to the meat consumption of men. Since meat consumption has strong cultural associations with masculinity, particularly in Western society, men tend to be less likely to reduce their meat consumption, despite knowledge and awareness of its impacts (Lentz et al., 2018).

Socio-cultural norms are strong forces that encourage and legitimize certain eating practices (Stoll-Kleeman & Schmidt, 2017). The notion of a “meatless meal” serves as an example that a meal with meat is the norm in which you would be deviating from if you chose to give up the animal protein (Heinz & Lee, 1998). In their qualitative assessment examining the most relevant influences on meat consumption, Stoll-Kleeman and Schmidt (2017) found that sociocultural factors (i.e. social norms, roles and relationships, and culture and religion) influenced by economic and food environment factors were among the most important influences. Moreover, the authors state that if the cultural and social norms around food shift, so too would the external environments that influence food-related practices.

The consumption and avoidance of meat has had ties to religion for decades. For example, pork is forsaken in Judaism, and pork and beef are forgone in Hinduism and Buddhism. In an empirical analysis examining the nutrition transition of meat consumption by Vranken, Avermaete, Petalios and Mathijs (2014), culture and religion were found to significantly explain

differences in meat consumption within and between countries. Thus, indicating that religious and cultural ideologies and beliefs can transcend other system levels to the individual and shape beliefs, ideologies and practices related to meat consumption.

The social practice of consuming meat. Social Practice Theory moves away from focusing on individual behaviour for analysis, instead centering "the social and collective organization of practices—broad cultural entities that shape individuals' perceptions, interpretations, and actions within the world" (Hargreaves, 2011, p. 79; also see Theoretical Approaches). SPT finds its place as middle ground between individual agency and structure, where the practice itself becomes central to analysis, rather than the individual performing the practice or the structures influencing it. Using Shove and Pantzar's (2005) social practice theoretical framework, social practices can be understood as consisting of three main attributes: hardware (technology, materials, products), skills (practical knowledge, competence), and meaning (norms, symbols, social expectations). These components are integrated together through regular and repeated performance by "practitioners" (Shove & Pantzar, 2005)

Applying Shove and Pantzar's (2005) SPT to conceptually understand traditional meat consumption, the practice involves a set of material, such as easily accessible and affordable meat products; skills, such as generationally acquired procedural knowledge of how to cook, how much to make and how to structure the meal; and meaning, such as the belief that meat is central to the dish or emotional connections to meat. The links between these key elements are constantly produced, reproduced and maintained through space and time. From this conception, meat consumption is not solely or simply the act of consuming meat, but is much more complex, involving many interconnected elements and habitual processes that largely go unquestioned (Shove & Pantzar, 2005). In the following section, dominant food consumption practices will be

further unpacked as they relate to aspects of the food system and current trends in environmental impacts.

Current Issues with Meat Consumption and Production

The global food system is a significant contributor to climate and environmental change, such as “land-use change and biodiversity loss, depletion of freshwater resources, and pollution of aquatic and terrestrial ecosystems” (Springmann et al., 2018a, p. 519). While it is difficult to fully capture the complex environmental impacts of various diets, diets that replace ruminant animal sources (e.g. cattle, goats, sheep, etc.) with other sources (e.g. poultry, fish, pork, etc.) are associated with reduced environmental impacts (Willet et al., 2019). However, diets that are predominantly vegetarian and vegan are associated with the largest reduction in land-use and greenhouse gas (GHG) emissions, with vegetarian diets also associated with a greater reduction in water use than diets predominantly reliant on animal protein. Ultimately, diets emphasizing a public health focus (Godfray et al., 2018), such as ones that are predominantly plant-based and consistent with current evidence on healthy eating, are the most appropriate for achieving “sustainable diets” (Willet et al., 2019; Springmann et al., 2018a; Springmann et al., 2018b). For example, Springmann et al. (2018a) estimate the environmental impact of a dietary shift towards one that follows global dietary guidelines (i.e. 300g of red meat per week, 31g of added sugar per day, 400g or 5 servings of fruits and vegetables per day) using scenario analysis. They found that this shift could reduce GHG emissions by 29% and other environmental impacts from land-use, water-use, chemical pesticide and fertilizer-use by 5-9%. However, a shift towards a more plant-based, “flexitarian” diet, could result in a reduction in GHG emissions by 56% and other environmental impact by 6-22%. For example, 500g of regional and colourful fruits and vegetables; 100g of plant-based protein sources, such as legumes, beans, nuts; modest amounts

of animal protein, such as fish, eggs, milk, chicken; and limited amounts of red meat, such as one portion per week, added sugar, vegetable oils high in saturated fat, and starchy foods (Springmann et al., 2018).

However, according to Godfray and colleagues (2018), on average, global consumption of all meat products is approximately 122 g per day. A fifth of this is beef, two-thirds is pork and chicken respectively, and the remaining proportion sheep, goats and other animals. While Godfray and colleagues (2018) state that consumption trends have plateaued and potentially decreased in high-income countries (although increasing in middle-income countries, such as China and East Asia), Springmann and colleagues (2018) warn that “if socioeconomic changes towards Western consumption patterns continue, the environmental pressures of the food system are likely to intensify” (p. 519). This is because the global food system “is the largest cause of global environmental change” (Willet et al., 2019, p. 3). Specifically, 40% of global land and 70% of freshwater use is utilized for the production of food. Moreover, destruction of natural ecosystems due to cropland and pasture conversion, and the extensive and unnecessary use of chemical fertilizers and pesticides have threatened species extinction and led to dead zones. Altogether 30% of global greenhouse gas emissions is attributed to the food system (Willet et al., 2019). Thus, consumption trends that de-emphasize these production practices are a clear solution to their environmental impacts.

Because of the complexity of this issue, it is important to note that a reduction in the consumption of meat products is not the sole solution to the environmental and climate change impacts of the food system. Due to differences in environmental impacts from type of meat, production methods, regional needs, etc., there is not always a clear cut one size fits all solution. In fact, research has acknowledged that other mitigation measures are also necessary, such as,

advances in food waste and loss and technological improvements to production (Springmann et al., 2018a). There are also advances in alternative ways to produce food products that respect Earth system processes, using naturally occurring ecosystem services (e.g. pest control, nutrient cycling, water regulation, etc.) that involve less environmentally intensive and harmful processes, such as, “conservation agriculture, sustainable and ecological intensification, agroecological and diversified farming system, precision agriculture, and organic farming” (Willet et al., 2019, p. 15). Thus, in moving towards a more sustainable future, it’s important to raise critical awareness about the complexity of food production and eating practices and their environmental problems so that the most appropriate action for the environment is taken. For example, completely replacing animal-source products may not be feasible for someone living in a rural area with limited access to alternative plant-based sources, thus they may opt to purchase animal products from a local farm utilizing more sustainable production methods outlined above.

Examining meat consumption practices interwoven into various levels of the ecological system, it becomes clear that meat consumption can be dually an individual choice and the result of decades of social forces, unconsciously influencing the social conditions in which a “choice” can be made. With the added complexity of the environmental impacts of various consumption and production practices, efforts put in place to address the environmental impacts of individual meat consumption should also take into account that action is necessary at the individual and systems level. In the following section, previous approaches, strategies and recommendations from the current literature will be examined for their contributions to addressing this complex issue.

Previous Approaches to Reducing Meat Consumption

There is limited literature exploring effective strategies for reducing meat consumption in practice. Among what is most prevalent are behaviour change strategies focused on individual behaviour to reduce the demands on the food system. These strategies have commonly taken the form of linear models that stem from social psychological theory and generally maintain the assumption that consuming meat is a rational behaviour that can be changed. Some of the more prominent theoretical approaches and strategies are discussed below.

Linear models are the most commonly referred to frameworks for promoting behaviour change. These models stem from rationalist assumptions that upon education of environmental issues, environmental awareness and concern will develop, which will then result in a pro-environmental behaviour, such as recycling or reducing meat consumption (Kollmuss & Agyeman, 2002). Non-governmental organizations often base their information campaigns off the assumptions of this model, in that environmental knowledge will lead to a desired behaviour change of the masses (de Boer et al., 2014; Nye & Hargreaves, 2009). This model addresses the fundamental importance of knowledge and awareness for creating any kind of change, however knowledge and awareness alone is not always enough. Changing meat consumption practices can be more complex than this, and research has shown that this model of behaviour change is inadequate, especially when applied to meat consumption (Bywater, 2014; Kollmuss & Agyeman, 2002). As previously highlighted, consumption patterns are influenced by many factors that lie outside of individual rational choice, and meat consumption is an enduring and fluid practice that cannot always be transformed from one fixed state to another.

The Theory of Planned Behaviour (TPB; Ajzen, 1991, 2002; Stoll-Kleeman & Schmidt, 2017) is also commonly referred to as a framework for examining meat consumption behaviour. TPB emphasizes the role attitudes play in the linear model by positing that attitudes do not

change behaviour. They instead influence behavioural intentions, which shape actions. Intentions are influenced both by our attitudes and also by the social and normative external pressures, as well as our perceived behavioural control. Thus, they conclude that the determinants of behaviour are individual ideologies or beliefs toward that behaviour and the normative influence of others (Kollmuss & Agyeman, 2002). This theory has been applied in the context of understanding consumer behaviour to eat meat (Graça, 2016; Zur & Klöckner, 2012) and informed recommended strategies to encourage a reduction in meat consumption (see Carfora, 2017; Lentz et al., 2018; Rees et al., 2018; Weibel et al., 2019). For example, Weibel and colleagues (2019) recently integrated TPB with a phase model of behavioural change to identify the relevant factors involved in encouraging a reduction in meat consumption using quantitative data from a representative survey in Switzerland. The authors found that attitude, perceived behavioural control, as well as awareness of the problem impact the relevant phase of behavioural change (i.e. pre-decision-making, pre-action, action, post-action) that an individual has reached. The authors conclude that various strategies may be used to target each of the social psychological constructs of the TPB. For example, information campaigns to target individual attitudes, role models or celebrity ambassadors to address social norms, a ‘Meatless Monday’ intervention to address perceived behavioural control, alternative message framing to address personal norms, drawing the link to the negative impacts of meat consumption with footprint calculators to address problem-awareness, etc. (Weibel et al., 2019). This theory highlights the relevance of important individual social psychological factors when it comes to meat consumption and informing behaviour change strategies. However, Nye and Hargreaves (2009) posit that it largely ignores context, as consumption practices are significantly more complex than this and there are many other contextual factors that influence meat consumption. The

authors concluded that this theory speaks to the attitude-behaviour link only being strong when contextual factors are neutral. When contextual factors are either strongly positive or strongly negative, for example when the context or situation encourages or discourages a pro-environmental behaviour, attitudes have less value in predicting a pro-environmental behaviour because the context is a much stronger determinant (Nye & Hargreaves, 2009). Thus, there is a need to further examine the influence of systemic factors on individual variables.

Stern and colleagues' value-belief-norm theory (VBN; 1999) has also been utilized in explaining sustainable food consumption. This theory utilizes a linear model where behaviour is motivated by a causal chain of gaining environmental values, becoming aware of environmental consequences, and self-ascribing beliefs of responsibility and personal norms about the conditions in the environment related to the pro-environmental behaviour (PEB) (Hartmann et al., 2018). VBN posits that using communication strategies that affect perceptions of environmental consequences and personal responsibility of these consequences can influence consumers' behaviour (Hartmann et al., 2018). For example, research has drawn from VBN to recommend message framing as an effective strategy to encourage a reduction in meat consumption by tailoring messages to fit within various value frames (Graham & Abrahamse, 2017). This theory highlights the important role of values when it comes to taking action for the environment. Understanding the role of values, beliefs and norms is important when examining meat consumption practices, as these are strong influential factors on individual practices. However, when looking at meat consumption as a social practice from an ecological model lens, one is cautious that this theory takes a linear form that ignores contextual, systemic and less controllable factors that influence behaviour at other levels of the system, especially values, beliefs and norms. Furthermore, it's important to be cautious when approaching meat reduction

from this theoretical framework, as centralizing individual behaviour situates the responsibility of environmental destruction on the individual as a consumer rather than as a citizen capable of greater influence on society (Maniates, 2001).

In moving towards understanding meat consumption as less of a rational deliberative process, recent research has branched from TPB to expand on the role of habits as having greater impact on meat consumption practices (Rees et al., 2018). As such, “habit control techniques” have been put forth as effective ways to address the highly habitualized nature of meat consumption in the form of “implementation intentions”—or “if-then” plans, which specify where, when, and how to act on one’s goal intention (“If situation X arises, then I will perform behaviour Y”; Rees et al., 2018). Similar to the formation of a habit, planning one’s goals in this way creates a situation-action link, an easily accessible mental representation of what to do in a situation (Rees et al., 2018). In an experimental study, implementation intentions were found to be an effective strategy in encouraging participants to more readily think about their intention to reduce meat consumption as well as eat less meat. In another randomized controlled trial, Loy, Gollwitzer, & Oettingen (2016) found that implementation intentions are an effective strategy, but primarily for individuals already motivated to reduce their meat consumption. Though this approach shows promising movement toward understanding meat consumption as outside of individual conscious choice, the experimental nature of this study examines intentions separate from the real-life context of meat consumption practices and lacks consideration of the environmental resources and other barriers previously highlighted.

Linear models highlight the power of individual factors (i.e. knowledge, awareness, values, beliefs, norms, etc.) when taking action or creating change, at the individual level. However, when examining these from an ecological model lens, it is clear that the role of other

contextual and systemic factors on these individual ones, such as the role of broader cultural beliefs and values, is largely ignored. Thus, it's important when exploring effective ways to promote a reduction in meat consumption that these broader influences are considered, even when focusing on the individual level outcome of meat consumption. In an experimental study, Kurz (2018) acknowledges that despite motivation to reduce meat consumption, many people have trouble doing so. Thus, there is a need to look beyond the individual as a rational decision-maker responsible for resisting the strong socio-cultural forces of meat consumption interwoven in the fabric of society, and instead move toward examining contextual factors that influence decision-making. They conducted a field experiment examining the effectiveness of nudging, or softly pushing individuals toward a desired behaviour, to encourage consumers in a restaurant at a university toward the vegetarian option. In the experimental condition, vegetarian options at the restaurant were made more salient by re-ordering menu items and increasing the visibility of the vegetarian dishes in comparison to an untreated comparison restaurant. Results from this study show that nudging proved to be successful at increasing the percentage of vegetarian dishes sold, even after the intervention ended (Kurz, 2018). Though examination of this strategy in a variety of populations and settings (e.g. less educated, working class, lower income neighborhoods) is lacking, this study, conducted in situ in a real-life context, highlights the need to address contextual factors that shape individual consumption practices and demonstrates the effectiveness of utilizing strategies that realize the potential of these factors to leverage positive change.

Taken together, the benefits and drawbacks of previous research spotlights that dual action is needed to address both individual (e.g. problem awareness, environmental values, etc.) and societal level (e.g. policy changes to dietary guidelines, nudging toward and increases in

access to environmentally friendly choices, etc.) In the following section, an approach to participatory action research will be discussed as a method which can be used to build upon the promising aspects of previous strategies, while also addressing their shortcomings.

Theoretical Approaches and Methodological Frameworks

The over-arching theoretical lenses from which I will approach this research will be discussed in the following section. Specifically, social practice and empowerment theories are used as relevant theoretical frameworks to understand how the present study aims to address the shortcomings of previous meat reduction strategies. Participatory Action Research (PAR) and peer education are also discussed as alternative ways to approach this issue that align well with both theories and diverge from the more individual-centred approaches discussed in the literature.

Social practice theory. Following the tenets of social practice theory (discussed in section ‘Meat Consumption’ above), meat consumption is regarded more as a habitual practice than a rational decision-making behaviour separate from the influence of socio-cultural forces. Examining the literature from a social practice lens, I am critical of previous approaches that have aimed to identify individual psychological factors as predictors of behaviour with the underlying assumption that as soon as pro-environmental beliefs are acquired, behaviour can be changed. According to social practice theory, such models align with neoliberal ideologies in focusing on changing individual consumer choice by shifting the responsibility of addressing environmental issues on to individual agency, independent of context (Hargreaves, 2011). This research will be conducted from a social practice theoretical lens by centering meat consumption as a broader practice that involves more than the rational choice of human behaviour, and will

examine this in situ, where the context will be regarded as an important and highly influential factor.

Empowerment theory. With the underlying notion that mastery and agency are essential ingredients for encouraging engagement, empowerment theory is a fundamental theoretical lens from which the present study is approached. Rappaport's (1987) empowerment theory defines empowerment as, "the process, or mechanism by which people, organizations, and communities gain mastery over their affairs" (p.122). Zimmerman (1995) distinguishes between empowering processes and empowered outcomes. Empowering processes involve three components. At the intrapersonal level it involves individuals drawing a linkage between their goals and how to achieve them and is characterized by developing a sense of self-efficacy, competence, and control. The interactional component involves developing critical awareness of causal agents, developing skills and mobilizing resources. Finally, the behavioural component involves gaining mastery over their lives, whether individually, organizationally or in the community. An empowered outcome is in essence the consequence of empowering processes and ideally would involve measuring whether empowerment occurred, although this is sometimes advised against as empowerment may look differently in different people and contexts (Zimmerman, 1995). In their study examining the role empowerment plays in climate-protective consumer behaviour, Hartmann, Apaolaza, and D'Souza (2018) add to existing theories in positing that empowerment is both a mediating and moderating factor. It is both a process that involves motivational mechanisms that evoke action involving gaining control over issues that concern them, such as reducing meat consumption. But empowerment can also be the result of engaging in a pro-environmental action, as gaining mastery over an issue that concerns them can be accompanied by a sense of control. Drawing from the work of Zimmerman and Warchausky (1998), Hartmann

et al. (2018) state, "because empowered individuals experience a sense of control and feel that they understand their socio-political environment, they are also more active in efforts to actually shape their environment" (p. 399). This in turn, can impact future behaviour, as individuals feel empowered and capable. While this research aims to diverge from previous work centralizing individual psychological processes for study and is critical of how this work can perpetuate putting the onus of addressing environmental issues on the individual as opposed to the state, it also understands that a certain level of empowerment necessitates understanding how the socio-political environment shapes our practices so that we can attempt to change our environment in return. In approaching my research project from empowerment and social practice theoretical lenses, the goal will be to engage and empower participants in creating change at multiple ecological levels (e.g. individual, social, organizational, etc.) while holding context central to the research.

Conscientization. Conscientization, or critical consciousness, popularized by Paulo Freire, involves "the development of critical awareness as a result of an educational process by which people move from one level of consciousness to another as they become aware of and begin to enact their own agency" (Champeau & Shaw, 2002, p. 35). This study also holds conscientization as an essential function of empowerment, as conscientization and empowerment are two of the most prominent conceptual frameworks for examining civic development and engagement in societal change efforts (Christens, Winn & Duke, 2016), and conscientization is even posited as linking the three components of empowerment outlined above (Israel, Checkoway, Schulz, & Zimmerman, 1994). In this process, people begin to understand the socio-cultural environment that moulds their lives and develop a capacity to transform it. As such, movement toward empowerment requires the development of critical consciousness as it stems

from a dialogue, action and reflection paradigm where people critically examine their lives in order to enact social change (Carr, 2003; Champeau & Shaw, 2002). In the context of this research, it is anticipated that participants may develop critical consciousness regarding three main facets of meat consumption: food products, particularly meat products, and how they're produced; the link between food and meat consumption and production, and climate change; the fact that individual food and meat consumption are not necessarily solely a conscious decision but also as a social practice shaped by broader socio-cultural forces.

Participatory action research. In this study, elements of participatory action research (PAR) are drawn from to uniquely approach the research from a methodological framework that can empower, engage, and develop environmental action competence as well as critical consciousness.

Participatory action research is an approach to research that can take many forms but is primarily qualitative in nature. According to Baum, MacDougall and Smith (2006):

PAR seeks to understand and improve the world by changing it. At its heart is collective, self-reflective inquiry that researchers and participants undertake, so they can understand and improve upon the practices in which they participate and the situations in which they find themselves (p. 854).

Central to this approach is research being conducted in collaboration with community members as co-researchers rather than as subjects for study (Kidd, Davidson, Frederick, & Kral, 2018). The knowledge and skills of each member are valued in advancing the research and the role of the researcher is then to be a facilitator for dialogue, reflection and action (Bywater, 2014). Typically, PAR is used as a method to explore phenomena, and enact social

transformation (Piran, 2001), as well as action for change (Eryaman, Yalcin-Ozdilek, Cetinkaya & Uygun, 2010).

Participatory action research is a valuable approach to addressing the shortcomings of the current literature, as it can empower, rather than merely educate, equipping participants with the capacity to create change in the broader socio-ecological system (Bywater, 2014). In a PAR project involving students in a university classroom as co-researchers in an assignment on plastic bottle pollution, it was found that PAR was an effective strategy in bridging the linear behaviour change gap (i.e. information regarding environmental issues not actually leading to change in behaviour) by equipping student-participants with the "knowledge, skills, and opportunities to solve environmental problems" (Bywater, 2014, p. 924). This PAR project fostered conceptual awareness of environmental problems by equipping participants with knowledge of how individual and collective action can impact the environment in situ. Thus, it created the potential for both individual change and larger structural implications for sustainability through collective participation and building environmental action competence—the ability act regarding environmental concerns (Jensen & Schnack, 1997). This PAR example highlights the promise of deviating from traditional behaviour change methods, where intention to change may come from external factors (e.g. pressure from other people or advertisements; Jensen & Schnack, 1997) and is more so focused on the immediate goal of changing behaviour (Breiting & Mogensen, 1999); and instead fostering action competence methods, where individuals are equipped with the lasting ability to consciously make up their mind with regard to acting for the environment (Breiting & Mogensen, 1999; Jensen & Schnack, 1997).

Furthermore, PAR can be utilized as a valuable tool in research as it can foster critical consciousness and engagement in sustainability. In a participatory action project conducted by

Donovan (2016) on the topic of sustainable consumption, children, in collaboration with a communication designer, created visual narratives that expressed their views on this topic. The findings from the participants' visual narratives were shared with communication designers to provide them with conceptual frameworks for future design of activist artefacts. This promoted collective responsibility and action rather than individualization of responsibility; underscored common assumptions about recycling; illuminated obsolescence and the attraction of the new; and brought attention to being satisfied with less and sufficiency (Donovan, 2016). By employing this approach to PAR, it was used as a means of empowering the young people involved in the study to have active voices in sustainable consumption discourses. Donovan's work also showed how this approach to research can be used as a tool to encourage critical engagement with sustainability and consumption by providing the participants with the opportunity to express their views and contribute to discourse that they may not otherwise be a part of (2016).

Participatory action research uniquely approaches scientific inquiry. By providing the platform to work *with* rather than *on* participants; by providing participants with the opportunity to think critically about sustainability and develop environmental action competence, as well as the opportunity to act; by regarding participants as citizens rather than consumers; and by empowering participants to make informed decisions individually and collectively, PAR fits seamlessly within the theoretical lenses for which this research is being approached, as a tool to address the shortcomings of the literature and attain the objectives of the study.

Peer-to-peer education and support. Most research on RMC has focused on individual behaviour change separate from the social context in which individuals are embedded, ignoring

the inherent social aspect of the practice. Conversely, it only makes sense that if researchers want to affect a social practice, they need to target that practice socially, not just individually.

Evolving from the mental health and addiction sector, peer education takes on many definitions. However, a general theme is that “peer education involves those of the same societal group or social standing educating each other” (Svenson et al., 1998, p.7). Peer-to-peer education can be about multiple issues or a specific concern, and can be formal or informal; but a central component is that the learning and teaching elements of the education are being fostered by peers with a shared social status, whether it be gender, age, occupation, cultural membership, etc. (Parkin & McKeganey, 2000).

Typically, peer-education has been utilized in sustainability and environmental action fields with youth as a promising approach to creating change and building action competence (see Dittmer et al., 2018; De Vreede, Warner, & Pitter, 2014), although literature in this area is quite limited. Peer education among adults is a booming practice in the mental health and addictions fields, however, within these realms it is more commonly referred to as “peer support” rather than “peer education.” Though there are some differences between peer education and peer support, these differences are largely by field. In fact, some authors utilizing peer education approaches for environmental action give preference to the term “support” over “education” due to the inherent authority and control that the latter term may imply (Parkin & McKeganey, 2000). Regardless, models employing peer education and/or support have been successful in supporting positive change, competence and action.

In a study examining the ability of an environmental program employing a peer education approach in influencing youth to take sustainability actions, the authors found that utilizing this approach gave youth the opportunity “to acquire new knowledge, practice action skills, shift

their environmental behaviour and attitudes, and deepen their ecological values.” (De Vreede et al., 2014, p. 47). Moreover, the opportunity provided the peer educators with the opportunity to engage in pro-environmental behaviour, build a sense of both individual and collective empowerment, shift towards pro-environmental attitudes and values, develop knowledge of sustainability, build interpersonal relationships, and engage in sustainability actions, both within and outside the program context (De Vreede et al., 2014).

In another study examining the effectiveness of peer education with runaway/homeless youth, the authors found that a peer-led intervention in comparison to an adult-led intervention and no intervention from adults or peers was the most successful in influencing desired change and action in the youth. Particularly the peer education intervention increased youth’s knowledge about drugs, promoted personal responsibility for actions, and promoted altruistic behaviour within social networks (Fors, 1995). Another project comparing the effect of involvement in a peer education model on reducing at-risk HIV behaviour with a control sample found that participants involved in the experimental peer education group noted a reduction in high-risk behaviour post-intervention. The authors concluded that engaging in peer-education models may in fact be an effective strategy for encouraging population-wide risk behaviour change (Kelly et al., 1991).

Peer education and support provides a hopeful alternative model for encouraging a reduction in meat consumption at a broader level “by modifying norms and stimulating collective action that contributes to individual change as well as changes in programs and policies” (Kerrigan & Weiss, 2000, p.2). Utilizing a peer education/support approach to encouraging adults to engage in reducing meat consumption is a unique opportunity to both apply this model to an under-studied demographic (e.g. adults) within the realm of sustainability

and to an under-studied action related to sustainability (e.g. reducing meat consumption).

Employing this model may stimulate the long-term engagement necessary for this environmental action.

Overview of the Present Study

Based on the literature reviewed, and the research supporting a need for a shift to a low meat society, it is evident that tangible changes are necessary. There is extensive support that individual change to a low meat lifestyle is viable (Frenette et al., 2017; Hartmann & Siegrist, 2017; Stoll-Kleeman & Schmidt, 2017; Laestadius et al., 2016; Stehfast et al., 2009), however existing research has focused solely on changing behaviour as an absolute outcome from “maladaptive” to “pro-environmental” (Nye & Hargreaves, 2009) and has relied on inadequate linear assumptions that once people are educated on environmental issues, pro-environmental behaviours will follow (Bywater, 2014). In contrast, other research suggests that making such a change in lifestyle is a significantly more comprehensive process, requiring a change in routinized social practices, active engagement, long-term involvement, and acknowledgement of the context in which individuals are embedded.

While reducing meat consumption has been considered an individual pro-environmental behaviour with significant impact on the environment (Frenette et al., 2017; Hartmann & Siegrist, 2017; Stoll-Kleeman & Schmidt, 2017; Laestadius et al., 2016; Stehfast et al., 2009), such recognition tends to emphasize individuals’ role as consumer first and citizen second, leaving little room to “think institutionally” about the larger structural issue and the power at play (Maniates, 2001). Thus, it is necessary to not only focus on engagement in sustainable food consumption practices but to also think critically about the role that these larger institutions play by empowering individuals to engage in broader environmental action competence.

Furthermore, examining the literature from an empowerment theoretical framework, it is evident that previous research is supporting a reduction in meat consumption, but not informing how to do so despite the influential power of various social contexts. This prescribes a major change in lifestyle by putting the onus on the individual, but fails to empower, adequately inform, or enable one to effectively do so within the context in which they are embedded. As such, understanding and exploring what a reduction in meat consumption looks like in context should be a prerequisite to prescribing individual reductions in meat consumption as a climate mitigation option.

The current study intends to address the shortcomings in the literature by (1) diversifying the present body of knowledge on reducing meat consumption by understanding the practice in context, (2) encouraging critical thinking related to issues of sustainability and sustainable food consumption, and (3) to discover, through this study's approach to PAR, what participants regard as important and relevant to their engagement in RMC.

In order to achieve the research objectives and fill the gap in the current literature, specific research questions were developed. These are: (1) To what extent does engagement in a meat reduction peer support group result in a reduction of meat consumption? (a) To what extent does it have an impact on individual meat consumption? (b) To what extent does it have an impact on participants' other environmental actions related to meat consumption? And, (2) What aspects of the peer support group contributed most to engagement in the meat consumption reduction process? These questions are intended to illuminate the context and process of collectively engaging in a low meat lifestyle.

Research Paradigm

This research is in alignment with the social constructivist paradigm, which understands that there is not merely one objective reality, but multiple realities that are constructed by people with different lived experiences within differing contexts (Nelson & Prilleltensky, 2010). Reality is relative to each participant in the research and doesn't favour one construction of it as more or less real. In this worldview, research is subjective, value-laden, and inductive (Nelson & Prilleltensky, 2010; Guba & Lincoln, 1994). Experiences with the food system and specific lifestyles, such as reducing meat consumption, are relative and specific to individuals in varying contexts. These differing experiences are all equally valuable, real, and true; and this research, which acknowledges and values its inherent subjectivity, inductively draws inferences from these differing realities.

In a social constructivist paradigm, the researcher and participant are interrelated and co-construct the research findings together. Often, a qualitative method is utilized to understand social constructions, and research is done collaboratively through dialogue, reflection, and a close working relationship (Nelson & Prilleltensky, 2010; Guba & Lincoln, 1994). In this study, a participatory action approach was utilized where participants engaged in reducing their meat consumption while the researcher facilitated the process. Together over approximately three months, the participants and the researcher experienced and co-constructed ways to effectively engage in reducing meat consumption.

A value guiding social constructivist research is that the world is left a better and more informed place than it was before (Guba & Lincoln, 1994). This project adds a missing contextual component to the literature by highlighting in situ accounts of engaging with less meat consumption, as well as examining an alternative approach to encouraging less meat consumption informed and created by participants in the context of their lives.

Research Context and Process

This study is part of a larger research project situated in Waterloo, Ontario. Waterloo region is home to a growing technology hub and many collaborative sustainability initiatives, such as Sustainable Waterloo Region (SWR). In partnership, SWR and The Cora Group, a commercial real estate development and management company, created *evolv1*. *evolv1* is a multi-tenant commercial green building, developed and owned by the Cora Group, designed for today's millennial workforce with the goal to achieve net positive energy and carbon-neutral output (Cora Group, n.d).

As an industry, green buildings have grown exponentially as they are increasingly becoming the solution to sustainable technological expansion. These buildings, referred to by Kibert (2004) as ‘high performance green buildings’, are facilities constructed ecologically at every level of the construction process, with the intent of reducing the environmental impact, being resource efficient, and promoting occupant health and well-being. A shortcoming of green buildings is that they don't always meet their performance targets due to factors such as occupant behaviour which may not be in alignment with the sustainability goals of the building. This is often referred to as the “performance gap” (Coleman & Robinson, 2017). As such, previous research has focused on ways to effectively engage occupants in pro-environmental behaviours; however, previous research has been narrowly focused on individual behaviour change strategies rather than engaging occupants in practicing sustainable behaviours (Coleman & Robinson, 2017). To address this gap, the Viessmann Centre for Engagement and Research in Sustainability (VERiS) led by Dr. Manuel Riemer, has partnered with SWR to develop and implement an employee engagement strategy to help the building achieve its environmental performance goals, as well as increase employee well-being and organizational success by creating a culture of

sustainability in the building, where members of the building community have shared values, norms, language, and practices that are focused on making individual and societal choices that foster social, economic, and environmental sustainability (Riemer, Lynes, & Hickman, 2013).

My research, nested within this larger project, was shaped with the vision of contributing to the culture of sustainability that VERiS is creating by offering occupants the opportunity to be part of a research project and program that engages them with sustainable food consumption. Though the objective of the project is to engage participants in reducing meat consumption and empower them to think critically about sustainable food consumption as an environmental action, access to such programming was also intended to contribute to overall engagement with the sustainability goals of the building.

In 2018, the research centre, Viessmann Centre for Research and Engagement in Sustainability (VERiS), which I am a part of, moved into the green building. Being trained in community psychology, I understand the importance of having lived experience with the phenomena under study, as well as the benefit of being a member of the community you're working with. As such, I think it's suitable that I, as an extension of the research team, conducted this research because of my experiential knowledge and because VERiS is an active member of this community.

Furthermore, I understand the importance of collaboration and empowerment in all work that is done in the community. This is why I believe that research should not simply be conducted *on*, but *with* the community. This study holds experience, collaboration, and empowerment at its core, which is why my experience with vegetarianism in conjunction with the empowerment and collaborative focus of the participatory research, were essential ingredients in this project.

Method

Research Design

In this study, an exploratory and participatory action approach was employed to better understand the experience of reducing meat consumption in context, and to explore the role of peer support groups as an alternative approach to engaging people in reducing their meat consumption. All occupants of the evolvl green building at the time of recruitment were eligible to participate in the project. Individuals that were selected for recruitment had expressed interest in reducing their meat consumption and participating in the peer group.

Participatory action research takes a critical stance on research where the role of the researcher becomes “agent of change” that attempts to “empower groups and individuals, thereby facilitating social change” through a collaborative process (Donovan, 2016, p.564). PAR embodies the values of empowerment theory and conscientization as it centralizes the role of participants in the research process, sees them as “collaborative change agents in the settings and contexts of their lives” (p. 61), and utilizes a process of action, reflection, and dialogue in doing so (Langhout & Thomas, 2010). The method and content used in participatory action research typically involves the project being primarily initiated by the participants, including problem identification and generation of research questions (Kidd & Krall, 2015). While problem identification and research question generation of the present study did not originate following this typical PAR feature, they did come to fruition from myself, dually as the researcher and member of the community in which the research is located. Moreover, additional elements of the participatory action research process were utilized during the conduct of the research, such as situating the participants as the experts in determining what they require to effectively engage in the research and meat reduction process and I, as the “academic researcher,” facilitating this.

Moreover, the outcome, or research findings, were determined in collaboration with the participants and contingent on the level and extent of their involvement in the group. For example, at the time of this study, all participants wanted to reduce their meat consumption to varying levels, however none of them wanted to reduce it completely to zero.

Participants

Selection criteria. To be considered for selection in this study, an eligible participant needed to be an employee, co-op intern, or volunteer of one of the tenant organizations of the evolvl green building, and available to meet weekly for a 6-week period. Additionally, they would have expressed some level of interest in reducing their meat consumption or in sustainable food consumption. To achieve a diverse and holistic account of the meat reduction process from various personal experiences and contexts, demographic factors were not a selection criterion in this study, except for the requirement to be 16 years or older.

Participant recruitment. Participants were recruited for this study via email and an information session. Emails containing essential information regarding the study as well as an invitation to a more detailed information session were sent by the main contacts of the tenant organizations out to their respective employee and volunteer lists (see Appendix A). The information session served as an opportunity to provide prospective participants with additional detailed information on the project, as well as get to know the researcher and other tenants of the building. In addition to this, the information session provided participants the opportunity to indicate their interest and sign up for the project by leaving their name and email address to be sent a pre-recruitment survey. It is important to note, however, that attending the information session was not a prerequisite for recruitment. To be eligible for recruitment, participants completed a short survey assessing their current level of meat consumption, their motivation for

participating in the project and what they'd like to gain out of this experience so as to better inform the facilitation of the peer groups. Potential participants that were interested in signing up but were unable to attend the information session could connect with the researcher to access the pre-recruitment assessment. In fact, opportunity to join the study continued even after the group meetings began.

Sampling. This study employed a form of non-probability sampling where participants were drawn through self-selection from a convenience and criterion sample. The convenience sample was taken from the larger project in which this study is nested, and the criterion was that they needed to be an employee, co-op intern, or volunteer for one of the organizations in the building. Considering the qualitative design of the project in highlighting rich, detailed and context-dependent accounts of the meat reduction process, this approach to sampling is the most appropriate as the objective behind this technique is to highlight information-rich cases that will illuminate the research questions under study (Patton, 1990). Moreover, the participatory action research approach was contingent on the active participation of motivated individuals whom have made the conscious decision to participate. In addition to this, and for the purpose of replicating the study design outside of this specific research setting, recruiting from a convenience sample through self-selection is the most suitable method.

Sample size. In qualitative research, often sample sizes of ten are sufficient to conduct case-oriented analysis specific to the research context (Boddy, 2016). Given the qualitative nature of this study, a small sample size was the target to ensure a rich account of qualitative data within the research context that a larger sample size may not be able to achieve. However, given the long-term commitment inherent in the study, seven participants (N=7) were recruited and actively participated in this study.

Data Collection & Procedure

Pre-recruitment assessment. Prior to the commencement of data collection procedures, this study was reviewed and approved by Wilfrid Laurier University's Research Ethics Board (REB #5860). In early February 2019, potential participants were sent recruitment emails with an e-invitation to the information session. This session also served as an opportunity for the prospective participants to get to know myself and was intended to start the relationship-building process central to this collaborative research. Additionally, the session also provided participants with the opportunity to express interest in participating and leave their contact information (i.e. name and email address) to be sent an electronic link to the online Qualtrics survey where they could officially sign up for the (see Appendix B). To participate in this study, completing the pre-recruitment assessment survey was mandatory. When the prospective participants followed the Qualtrics link, they were prompted with an informed consent form (see Appendix C) to read and electronically sign prior to commencing the remainder of the survey and being considered for recruitment. The questionnaire included 16 short pre-recruitment assessment questions. These included multiple-choice and open-ended questions to collect information about current levels of meat consumption, as well as participants' motivation for signing up for the project and what they intend to take away from their experience (see Appendix B for questions). For example, one question asked participants, "Based on what you know about this project, what are you hoping to gain from being involved in this program?" This information was essential in preparing for facilitating the group meetings. In addition to this, potential participants were prompted to provide their name, email address, and weekly availability to participate in the group meetings. This information was not shared for confidentiality purposes but was essential for the prolonged contact and communication with participants. Once availability was determined using the pre-

recruitment assessment, all participants who completed the survey were recruited and contacted to schedule the first group meeting. This part of the data collection phase occurred immediately following the information session and continued until all interested participants completed the survey. To remain as open and participatory as possible, opportunity to complete the survey and join the study continued even after the group meetings were scheduled and began.

Peer-support groups. In order to explore the research questions, six open-structured peer education/support groups occurred weekly for six consecutive weeks. These took place over lunch break with 7 tenants of the *evolv1* building actively participating in the group meetings. Consent was obtained prior to participation in the group (see Appendix D) An actively participating tenant is someone who extended a consistent effort to participate in the project since their original date of joining, regardless of how many meetings they attended (see Appendix E for group attendance). All meetings took place in the *evolv1* building, were facilitated by the researcher with current tenants of the building and lasted for one hour. The content, design and facilitation of the group meetings were intentionally left open to be largely determined by the participants themselves and emerge naturally. In my role as a co-researcher, I facilitated a relational process of dialogue, reflection, and action with the participants. Thus, I served primarily as a facilitative resource to the group while simultaneously capturing our collective experience for the purposes of generating transferable scientific knowledge.

The first meeting was primarily focused on building relationship, getting to know each other and setting individual and collective goals. During this early stage, and aligning with the principles of PAR, it was essential that the expertise be anchored in the participants experience (Piran, 2001b). As such, it was during this time that the participants explored the format and structuring of the groups, including confirming or denying whether peer groups is the preferred

approach to our collective experience, as well as determining the most appropriate data collection method to facilitate the research process. The content and structure of the subsequent group meetings were collaboratively agreed upon in this initial phase and were open to negotiation and renegotiation going forward. For example, during this phase participants collectively decided that discussing 6 main themes and setting weekly goals were two main processes they'd like to engage.

This approach to PAR draws from the consciousness-raising group work of Piran (2001b), where in the initial phase of the project, the participants determined focus groups were the most appropriate dialogical space to critically explore the topic under study to construct knowledge and to then create action. They determined together that summarizing at the end of each group what had happened; agreeing on actions that may be taken; and deciding on what they'd like to share in their community, the realm of research, and what should be kept private were the most suitable data collection, analysis, and knowledge transfer methods. Following Piran's (2001a) participatory approach, developing deep relational dialogues among the participants and the facilitator will provide the foundation for all group processes to occur, including making such changes to the procedure of the research project. Piran's (2001a; 2001b) process of qualitative scientific inquiry proved to be successful in illuminating themes and constructing knowledge that diverged from prominent literature at the time, as well as developing action competence through mutual support and relationship. This approach lends a promising qualitative procedure to draw from.

During this part of the project, I took field notes throughout each group meeting to note any important reflections, group processes, or prominent themes. Each week, the group processes (e.g. discussions, actions, reflections, notes, etc.) were collected as the primary source of data

and thematically analyzed to identify major themes regarding the group and engagement in meat consumption reduction. This form and style of qualitative data collection was selected to engage participants in being involved in a fun and informative project, to contribute to the broader culture of sustainability of the building, and to collect essential qualitative data regarding in situ experiences with reducing meat consumption and the role of peer groups in the process.

Post-group assessment. Two days following the final group session, participants were sent a post-group assessment questionnaire to complete as an exit survey. This was completed online using Qualtrics software. The post-group assessment collected similar data as the pre-recruitment assessment (see Appendix F) to allow for pre and post comparisons of the project and served as an opportunity to provide any exit reflections on all aspects of the research project that they may not feel comfortable sharing in person. For example, one question asked, “Do you feel that your involvement in the peer groups influenced your engagement in reducing your meat consumption?” Similar to the pre-recruitment assessment, it contained a mixture of multiple choice and open-ended questions. The survey closed after all participants completed the assessment prior to the member-check focus group. The data collected from this was essential for preparing preliminary findings to present back to participants for the member-check.

Member-check follow-up focus group and interviews. A two-hour follow-up focus group took place six weeks after the final group meeting with five of the seven participants. Two participants were unable to attend due to scheduling conflicts, thus the member-check process was conducted through interviews with each of them separately.

During the 6 weeks between the last meeting and the follow up, the field notes and surveys were thematically analyzed to then be presented to participants. Thus, this focus group served as a method of member-checking to either confirm, modify and/or deny whether they

captured their experiences and as a follow-up assessment to further inquire about participants' exiting reflections on the research process and their engagement with reducing meat consumption over the last 6-weeks. Preliminary themes were visually organized for presentation to participants (see Appendix G for focus group protocol). The visual encapsulated the small and informal nature of the group as a funnel including the three main participant driven group processes (i.e. sharing knowledge, experiences, and food; setting goals, and engaging in discussions) leading to the four main change mechanisms (i.e. consciousness, accountability, feeling support, and learning), which contributed to engagement in the meat reduction process. Weight and frequency of themes were not a factor in the visual.

Semi-structured interview and focus group questions (see Appendix G) were utilized to assess the validity of the preliminary research findings, and collect overall reflections of the groups, current engagement with reducing meat consumption, participant experiences with the peer group approach and intentions or motivations going forward. For example, one question assessing experiences with the peer group asked, "What aspects of the peer group do you think contributed most to your engagement in the meat reduction process?" The focus group and interviews were audio recorded, transcribed, and coded for thematic analysis to further expand on and refine overall themes, presented below.

Data Analysis

Qualitative analysis. All qualitative data were thematically analyzed following Braun and Clarke's (2006) framework for thematic analysis to systematically illuminate major themes and patterns that emerged in the data. An inductive approach to thematic analysis is useful in exploratory research (Clarke & Braun, 2017), such as this study. Following Braun and Clarke's 6-step framework for thematic analysis, the first step in the data analysis process was to become

familiar with the data (i.e. reading through all notes taken and taking additional notes on early perspectives of the raw data collected). The second step was to generate initial codes or reducing large quantities of data into smaller chunks of meaning. Initial/open coding using MAXQDA analysis software was utilized in this step and followed an inductive approach where coding was inductively grounded in the initial interpretations of the data. The third step was then to search for themes that capture something of interest or significance in the data. During this step, process coding was utilized to search for codes grounded in the research questions. The fourth step was to review the themes, which entails modifying or developing the initial themes. Axial coding was utilized in this step to refine themes and the relationship between themes. During this step, grouping similarly coded data reduced the number of initial and process codes and began developing an emerging framework for the themes. The fifth step involved defining the themes and performing a final refinement of them to capture the whole picture. During this step, each theme was carefully evaluated for their contribution and significance to the framework as a whole. Finally, the sixth step included producing the final write-up of the data analysis (Braun & Clarke, 2006).

To remain consistent with the participatory design of the research, the initial thematic framework was presented to the participants during the member-check follow-up focus group and interviews to ensure accurate and representative interpretations of the results (Krefting, 1990). This feedback as well as the additional qualitative data collected from the member-check was incorporated into the framework, which was then further refined following the same steps of thematic analysis where applicable. Themes and the coded datum that gave rise to the themes were then further examined carefully for frequency (i.e. the number of times the code was

utilized) and weight (i.e. significance of the coded datum with regard to the framework) to ensure quality of the data.

Results

Qualitative analysis of the notes taken during the 6 group meetings, focus group and interviews, and the post-group assessment qualitative questions highlighted a number of key themes regarding the two research questions. Results of the qualitative analysis are organized by research question and respective themes below. The sequence in which themes are presented are for the purposes of organization and flow of ideas. Language-use regarding reporting the extent to which participants individual and collective experiences contribute to the themes involve qualifying words (i.e. some, many, most). These are utilized to qualitatively capture participants experiences, as they varied in frequency and weight, and were described within the three main methods in which data was collected and themes were derived. The use of “most” describes almost, if not all participants in the study (i.e. 6-7). “Many” represents the majority of participants (i.e. 4-6). “Some” signifies approximately 2-4 participants.

Research Question 1: To what extent does engagement in a meat reduction peer support group result in a reduction of meat consumption? (a) To what extent does it have an impact on individual meat consumption?

Engagement in the peer group supports a reduction in meat consumption. When reflecting on engagement in the group meetings and its direct impact on participants’ ability to reduce their meat consumption, all participants agreed that their involvement in the group had a direct result on their level of meat consumption, particularly their reduced level of meat consumption.

P2: Just certain things that have come up because of this group that without it, I don’t think I would have reduced at all. So, I would say it’s almost 100% because of the group.

Many participants responses made it clear that their level of meat consumption changed with their level of engagement in the peer groups. Some participants noted that their level of meat consumption was particularly low while engaging in the group meetings on a weekly basis. However, after 6-weeks of no longer meeting, most participants noted that their level of meat consumption did not actually remain as low as when they were regular engaging in the groups on a weekly basis.

P3: [...] But I wouldn't say I've had a great reduction in meat over our last meeting.

P6: And then now I'm back. Like I just snapped back to my equilibrium.

One participant, however, noted that their level of meat consumption has continued, even after no longer engaging in weekly group meetings.

P1: So, I think in terms of, as I said earlier, I do think I have reduced it even more compared to when we met. And I feel like I'm still progressing on that. I'm finding myself more and more navigating to that.

Research Question 1(b) To what extent does it have an impact on participants' environmental action related to meat consumption?

Influencing the microsystem as environmental action. When it came to environmental action, most participants noted directly influencing their micro-system as another way of creating change beyond merely changing their own levels of meat consumption. In particular, changes within the micro-system were in reference to influencing their workplace/organization and colleagues or family/partners and friends.

For example, P2 recounts their experience influencing the amount of food waste produced from their workplace's daily catered lunches after the group encouraged and supported her to create that change:

P2: Yeah, so I've brought it up a couple times of just how much food we were wasting. And so actually the woman who orders the lunches has now made a conscious effort to order less like all the time and also bringing in more takeout containers if there's leftovers and people are more encouraged to make sure you take it all home before it gets thrown away or whatever.

Moreover, P4 recounts their experience engaging in broader environmental action by influencing colleagues within their workplace/organization as a biproduct of trying to meet their own meat reduction goals:

*P4: I'm the person that orders all the food and stuff like that. And I have more power to make decisions, so I just order vegetarian now just cause' usually it's cheaper and also, there's less dietary restrictions rather than the other way around. So, I think that's like—cause' I initially started doing it cause' I was like, "oh, if I do this then I meet my meal goal. So ya'll have to comply. I have the power and I'm paying for this." [*Laughter]. So that's kind of a side effect that our team got slightly more vegetarian.*

Many participants recounted that beyond reducing their own levels of meat consumption, they also influenced their family, partners and/or friends. In doing so, they made RMC seem more approachable to others:

P2: Like if I talked to my coworkers or like fiancé or family or whatever just about it, it becomes more of an approachable thing that they can also kind of get on board with too. Like you know, together we'll have a little bit less meat. It's like a steppingstone vs. like bam I'm in this camp now. Goodbye everybody.

P1: So, I think talking about it in that way, I think people responded to it like, "oh yeah. Maybe this is something that I can do as well."

One participant even recounted that they had a direct impact on their partner's level of meat consumption:

P2: [...] and spreading the word to friends and family where appropriate so they have the same information. Already my fiancé has been really cutting down on beef and lamb since I told him my findings.

When it came to engaging in environmental action, participants responses also varied based on their level of engagement in sustainability and environmental action prior to joining the group. Some participants who were already personally and professionally engaged in

environmental action and the sustainability-related field didn't find that their involvement in the group impacted any further environmental action because of their pre-existing level of engagement.

P6: So, I would say no, it hasn't. But I'm coming—I'm somebody with a PhD, right? And I'm enmeshed in this field.

Although one participant already engaged in environmental action noted that beyond their own reduction in meat consumption, they also talked to others about their experiences, making RMC an approachable process for others:

P1: I think I might not be the best participant because my level of environmental engagement was already pretty high coming in. No, I think I was really mostly focused on eating less meat. But also talking to others about it. I felt being part of the group helped me using that as a conversation starter and sharing some of the experiences.

Thus, beyond individual change, most participants engagement in other environmental action primarily centred around influencing those within the micro-system, such as family/partners, friends, co-workers, workplaces, etc.

Research Question 2: What aspects of the peer support group contributed most to engagement in the meat consumption reduction process?

Naturally emerging group processes. There are three main group features that contributed to participants engagement in the meat consumption reduction process. These key features were not pre-planned but developed naturally from participant dynamics and input. The processes developed into the weekly structuring of the group meetings where participants individually engaged with them to the extent that they needed to.

The opportunity for processes to emerge naturally became salient as a beneficial aspect of the group in contributing to reducing meat consumption as it provided the opportunity for

“consensus-building” or getting through the processes of RMC on their own rather than through a top-down or more rigidly structured approach to influencing change.

P3: I think that kind of natural consensus building is, to be honest, completely necessary for your project. I think if it was coming the other way around, you as a researcher, are introducing too much of your own bias into what is supposed to be a group outcome for your project. Is the way I view it. And again, looking at blowing this up and upscaling it, this has to be, in my opinion, the way it is, kind of this natural consensus building, rather than the top-down approach to have real kind of impact. People have to get to this themselves rather than being told.

Many participants also mentioned the weekly occurrence of the group processes (discussed below) as a beneficial aspect for being a consistent reminder to engage in RMC.

P3: For me, I think when we were meeting weekly, I had that accountability, and so it would get to like Sunday night, and be like, "oh... forgot to have meatless this week." So, then it's like Monday would be meatless.

P2: But since that, I think for me, not having a more regular check in or a tracking or something—because at least when I'm thinking about it in terms of a one week chunk of like, within this one week, my goal is this and I, then I'm really on it.

Allowing processes to naturally emerge was also noted as a beneficial aspect of the group, as it allowed participants the agency to engage in processes that would work for them; and alternatively, not engage in processes that wouldn't work for them was, creating space for individualized engagement opportunities rather than imposing a rigid engagement strategy.

P2: Like it wasn't necessarily from the beginning this is how it's going to work, it's going to be a potluck every time. But it just kind of was, it felt like a more organic idea that turned into something that everybody kind of just wanted to participate in vs. like it was like a mandatory part, so that kind of thing was cool that it changed into that. [...]. It's like, so if it works for you, do it. If it's not going to work as well for you, don't worry about it. Like, I like that flexibility.

Leaving the group openly structured also allowed for deeper relationship building throughout the process, which was consistently noted as a beneficial impact on participants engagement (sub-theme discussed further in a later section).

P5: No, I agree with the open approach, as well. I think it was important to create trust and relationship with each other to like build on the support and talk about our successes and our failures, I think the structured activities would've been more appropriate if it was more than 6

weeks. But I think it was very important for the 6 weeks to get to know each other, kind of figure out each other's goals.

Three main processes naturally emerged from the dynamics of the group. Each process was established early on, during the first meeting, and evolved to become pillars of the group meetings. These were setting goals, sharing experiences and resources with the group, and engaging in critical discussions.

Setting goals and checking in about them. The idea to set goals emerged early during the first group meeting when the group was summarizing the key themes, activities and takeaways that they'd like to experience from their involvement in the research project. As key themes were discussed, one participant suggested set goals to be compared to at the end of the project.

Excerpt from notes: "P2 adds that we should set goals to compare to at the end and this sets up a conversation about how we should be accountable to each other"

From the initial meeting, setting goals continued to occur on a weekly basis and evolved to become an anchor for the group meetings, where they would check-in or share about their experiences with trying to achieve the goal from the previous week and set a new goal to be achieved by the following week.

P2: The only thing I can think of is the fact that it kept a regular rhythm to the check-ins, so it was always on my mind when I made food choices.

Moreover, participants set goals on an individual and contextual basis, meaning these goals were unique to the person and their ability to achieve them. For example, one participant set a goal to only consume meat products two days a week, whereas another participant set their goal to be meatless two days a week.

Additionally, if in hindsight, participants realized that the goals set were too ambitious, participants either compromised or modified their goal in an attempt to do the best they can.

Excerpt from field notes: “P5 didn't achieve this [trying two new meatless recipes] but altered [the goal] to modify previous meals they made. [Insert pseudonym] thinks that this is still a win. They found it difficult with life stuff that got in the way, so they modified her goals.”

Sharing. Across each group that took place there was a consistent theme of sharing that emerged among the participants and me. Evolving from the idea to set goals and check in about them, sharing became another foundational element to the group meetings that participants expected to occur each week and therefore came prepared for. Among the phenomena that were shared were two main categories: experiences pertaining to the topic of RMC and resources related to RMC, such as food recipes, or general knowledge.

Some participants reported that sharing experiences contributed to the community and relationship-building aspect of the group (discussed below) that impacted their engagement with RMC:

P2: Well I think that [sharing] definitely contributed to the sense of community of like, I feel like I know these people more now, I feel like we share some of the same struggle sometimes, and it kind of made it more of a group that I felt a part of and identified with. And like, it kind of made me want to come. Like, sort of the, like the welcoming aspect of like, even though you come late, it's fine. And if not everybody hit their goals every week, it's fine. There's that. It just made it more friendly and interesting, I think. Something that I wanted to be in vs something that I feel like I have to be in.

P1: I kind of agree with that. That personalized it a little bit more, right? Like it made it about the people in the group. With everybody sharing their knowledge and experience, it supplemented what else we have.

Some participants also felt like sharing not only contributed to the supportive nature of the community but also to the opportunity for learning (discussed below).

P6: To listen to other people's experiences and to get the resources from other people about how to do it was really supportive and nurturing

Sharing experiences with engaging in RMC, whether positive or negative, was also highlighted as a beneficial supportive aspect of the group. For example, one participant notes

that hearing about others' real challenges with attempting to reduce their meat consumption and/or meet their goal made engagement in the process more approachable to them:

P4: I really like that people talked about their failures cause' then you're like. 'Oh okay I don't feel as bad because I didn't meet my goal.' Or something like that.

Discussing. Another group element that emerged consistently across the group meetings was the process of discussing. In the context of this group discussing differs from the theme of sharing. Wherein sharing involved one participant relaying personal experiences back to the group with minimal group input in return, discussing involved more back and forth between two or more group members contributing to the conversation. This most often occurred while talking about relevant topics or themes rather than during designated times for each group member to share their experiences regarding goal setting. The idea to discuss weekly themes were also participant driven.

Excerpt from field notes: P6 highlights that they think a number of themes have been brought up that they thinks we should talk about: Diabetes/health/nutrition, carbon footprint, recipes, places to buy ethical food/different ways to get meat, [reducing meat consumption while] traveling to other countries, and collective action.

While weekly discussion themes were identified early on during the first group meeting, discussions often emerged naturally, whether or not they remained on track for the theme of the week. Being participant-driven, group discussions most often centred around finding local vegetarian options, getting adequate nutrition and nutrition myth-busting, recipes and food, as well as the environmental impacts of our food choices.

Similar to sharing, the process of having a group discussion was also mentioned as being an element of the group that provided a learning opportunity, contributing to participants' engagement in RMC:

P6: Yeah, I think the back and forth discussions is where a lot of those lessons came out and where—where I'm talking about being inspired and stuff like that, that was due to the group discussions.

Change mechanisms. From their participation in the group processes, participants reported various ways their involvement in the group meetings impacted their engagement in reducing meat consumption. Similar to the individualized nature of the group processes, perceived and reported impacts on engagement are experienced individually, however there were several commonalities among them. Thus, while they are experienced individually, there was a collective element in that most participants reported these impacts to varying degrees. Common themes were that of feeling accountability, feeling increased consciousness, having an opportunity for learning, and building community and relationships with other group members.

Accountability. Notions of feeling accountable were prevalent amongst discussions during the peer group and, most notably, during the focus group and interviews. The presence of accountability was attributed to various factors related to the group, particularly meeting on a weekly basis, and were directed to both the self and to the group.

For example, many noted that the weekly meeting and weekly goal check-in structure in particular contributed to feelings of accountability, especially to the group, in terms of remaining on track with what they publicly said they would do and serving as a reminder to do it.

P3: For me, I think during when we were meeting weekly, I had that accountability, and so it would get to like Sunday night, and be like, "oh... forgot to have meatless this week." So, then it's like Monday would be meatless.

Some participants noted that having the group support meant that they were accountable to something other than themselves, increasing their likeliness of sticking to the change-making process, particularly achieving their weekly goals and staying engaged in group processes:

P4: [I] think with the group, it really helped with the accountability factor of it, cause' I'm not good at being accountable to myself. I think that helped me—

Other participants noted that engaging in the group led to not only feeling accountable to the group, but also to themselves, especially with regard to achieving their personal goals:

P2: For me it was the fact that I had made a commitment to the group, as well as a general personality thing where I need to do what I've committed to doing.

The concept of social accountability even extended beyond the confines of the group. One participant reflected on their experience discussing their involvement with the group to friends outside of the group and noted that publicly talking about it to social others created another level of accountability and influenced them to keep up with their engagement.

P1: I think the other factor is that I started talking to other people about this group and the research that we're doing with it. And so, you don't want to look like a hypocrite talking about a group that you joined about reducing meat consumption then order a big steak, right? So, I find myself, when I had those conversations, that I definitely ordered the vegetarian option.

This reiterates the influence that social others, a community, or the social context in general have on one's ability to create change and adhere to it.

Consciousness. Increased feelings of consciousness regarding RMC was prevalent throughout group discussions, the focus group and interviews, and individual reflections. Many participants noted feeling more consciousness regarding some of the topics we discussed during group and their own actions. For example, one participant reflects on their experience being more conscious of the nutritional value of foods after we dedicated time to talk about nutrition:

P1: And just simply engaging with it, so you're thinking more about it. So, we talked about the nutrition and what kind of food. So, then I started looking for those kinds of things. Or like what can I try with that? But I need to get my protein so where do I get my protein from? Really just thinking more consciously about these things.

Increased feelings of consciousness were also attributed to the goal-setting aspect of the group, as it brought importance to staying on track with this aspect of the group:

P2: I was like hyper conscious of every meal, every day, thinking about the vegetarian option, trying to meet my goals.

When reflecting on their level of engagement after having been involved in the group and no longer meeting on a weekly basis, many participants noted that their level of engagement with actually reducing their meat consumption was not necessarily as high as when they were meeting on weekly basis. Interestingly, despite this, most participants noted that their increased consciousness regarding RMC remained even after no longer meeting.

P2: Still I would say that me now vs me before the groups ever started is much more conscious, much more aware.

Despite consciousness still remaining after no longer meeting, some participants noted that once the weekly group meetings no longer occurred, so too did the accountability:

P3: During the 6 weeks, and it's hard to believe it's been that long already, I was still conscious of it but I didn't have that motivating factor to be like, "oh I have to report in" and set some accountability. So, it was easier to let it slide, like, "Oh I don't need to do this tomorrow, I can do it Thursday" or "The next time we do shopping we'll do a better job of getting what we need." Or something like that.

P2: So, I would say I'm much more conscious now than before, but it's not to the level that it was when we had those regular check ins.

Opportunity for learning. The group provided an opportunity and created a space for individualized learning about topics related to RMC that participants perhaps otherwise wouldn't have learned about if they hadn't taken part in the group. Opportunities for learning came from the set themes that were chosen to discuss, recipes that were shared, food that was shared, as well as hearing about the experiences of peers.

For some participants, they may not have otherwise learned about certain things that have influenced their engagement with RMC if they hadn't taken part in the group, which may be attributed to not already being within an environmentally oriented social or professional context.

P2: [I]t's the stuff we're learning in the group. Like when I learned about the beef, I might have not come across that kind of information otherwise. Just certain things that have come up because of this group that without it, I don't think I would have reduced at all.

For others, physically sharing recipes and food provided a relatively simple and easy way for participants to learn about recipes that made RMC much more approachable. This provided an opportunity to integrate a new way of structuring a meal into a pre-existing meat-centred paradigm on meal structure.

P3: I think it was just having those examples too. Like, we could look at the recipes in the cookbooks and stuff, but just to get ideas without even having to ask anyone for them. You could just see it and be like, “Oh, okay. That’s something I wouldn’t of thought of. And I can try it and see if I like it.” Without even having to approach anyone was kind of a neat I guess not planned thing on your part but something that did come of it from my point of view.

*P5: I find at the restaurants; some dishes are so elaborate but kind of liked that ours were basic. [*laughter]. But like doable.*

The informal potlucks also provided a more experiential learning opportunity to try their hand at actually making a vegetarian recipe.

P2: I think it was really cool because I don’t cook vegan or vegetarian recipes almost ever, like when I’m the one cooking, so it just gave me a reason to explore and try you know the—I still think about the chocolate chili that I made. There’s just like these things that come back that I’m like, I should do that again. But I never would’ve, I probably never would’ve tried those recipes if it wasn’t for this group, and seeing what everybody else brings to the table. And all the different ways that you can use these different ingredients.

Community and relationship-building. Having a space for community and relationship-building contributed to participants’ engagement in RMC in a variety of different ways, and often the community and relationships that were built between participants enhanced the impacts of the other factors that contributed to RMC.

For example, as previously mentioned, the relational/community aspect enhanced feelings of accountability to the group:

P3: It just echoes to me again, like that importance of having a community and someone that you’re like, I’m going to go cause’ I’m going to let somebody else down or their going to check in to see if I’m going or not.

But it also provided a space for peers with similar experiences to understand and support each other in their RMC processes.

P5: And to add to the community part, like I felt like people were like, “Oh, are you a vegetarian?” When you say no they’re not like, “Oh but I introduced two meals, vegetarian meals into my day.” I felt like the group understood that. Or like reduced meatless meals kind of thing. Cause’ they’re always like, “Well are you a vegetarian or are you not? What are you?”

The relationships that were built even served as a reminder to some participants to stay on track with the goals they set for themselves:

*P2: Or like the fact that the people in the group also serve as reminders when I see everybody that it just kept it on my mind a lot. The fact that the group was all located in the same building and it was likely I was going to see these same people throughout the week even if it wasn’t for this specific meeting. So, it just like, that helped, I guess. Like it just kind of [*snaps fingers] I would like see you or something, I don’t know, I would just, in the back of my head like oh yeah gotta keep on that thing.*

Discussion

Given the negative contribution of unsustainable meat consumption on the environment, this work examined the extent to which engagement in a meat reduction peer support group had an impact on both individual meat consumption, as well as the ability to influence broader environmental action. Results from this study suggest that engagement in a meat reduction peer group does indeed support a reduction in individual meat consumption and has impacts, although limited, on environmental action related to meat consumption, primarily in the form of influencing other social systems (i.e. friends, family, workplace). This study also examined what aspects of the meat reduction peer support group contributed most to engagement in the meat reduction process. Findings from the analysis of the qualitative data suggest that the participatory processes of the group as well as feeling an increased sense of accountability, consciousness, having an opportunity for learning, and most significantly, the social and relational aspect of engaging with peers contributed most to engagement in the meat reduction process. These key findings are discussed in more depth below.

Engagement in the peer group supports a reduction in meat consumption. This study found that engagement in the meat reduction peer group supported a reduction in individual meat consumption. Through the lens of Social Practice Theory (Shove & Pantzar, 2005), this result might suggest that engaging weekly in the peer group supported the active development of a new social practice. The links and elements of the existing social practice of traditional meat consumption were consciously challenged, broken, replaced, and re-made with a more sustainable consumption practice (Hargreaves, 2011). Within the context of the peer group, the links and elements between meanings (e.g. relying on meatless dishes as a new norm and as a new social expectation for weekly lunch meetings), hardware (e.g. alternative meatless products), and skills (e.g. knowledge of new meatless dishes, preparing meatless dishes, adequate nutrition, etc.) were integrated as a practice and continually reproduced through “regular and repeated performance” (Hargreaves, 2011, p. 83) for the duration of the peer group meetings (Shove & Pantzar, 2005). While the practice of meat consumption was not completely rejected altogether, the peer group facilitated the process in which individual meat consumption practices could be challenged, broken, replaced and re-made with more sustainable ones, or at least critical attempts could be made to do so by questioning what Giddens (1984) calls the practical consciousness and what Bourdieu (1984) calls the habitus, which leave practices unquestioned and able to be repeatedly practiced and reproduce day-to-day (Hargreaves, 2011).

After no longer engaging in the weekly peer group meetings, the reduction in meat consumption lessened. Thus, once individuals were removed from the context that facilitated the new social practice and the questioning of the practical consciousness (Giddens, 1984) and habitus (Bourdieu, 1984), engagement in the alternative practice was met with more difficulty in contexts with alternative, and arguably, conflicting dominant social practices (i.e. meat as central

to traditional meal structuring, family gatherings, etc.). When social practices are unable to be alternatively, consciously and collectively re-organized, the existing organization of practices that dominate perceptions, interpretations and actions within the world persist (Hargreaves, 2011). This highlights the need to not only look at single practices (i.e. individual meat consumption within the context of the peer group), but to also broaden the scope toward relations between “bundles of practice” (Hargreaves, 2011, p. 92) that exist together within various contexts of life (Warde, 2005), and understand how the links and elements between meanings, hardware, and skills of interrelated bundles of practices can be challenged and broken simultaneously. An ethnographic case study of a workplace behaviour change initiative utilizing a SPT lens was conducted by Hargreaves (2011). In this study an ‘Environment Champions’ initiative run by a UK charity in the head office of a construction company recruited a team of volunteers within the company to conduct an audit of the organization’s environmental impacts, plan a campaign to involve the entire organization in reducing their impacts, and conduct a second audit to evaluate the changes. Conducting the audit critically challenged the links and elements of practices within the organization and created a space within them that allowed the Champions to identify pro-environmental directions they would like to go in. However, they couldn’t detach entirely from the practices due to the existence of other interconnected practices. For example, a proposal to remove under-desk bins from the organization was rejected by practitioners of power due legal regulations, normative standards, etc., (Hargreaves, 2011). As Warde (2005) states, changes in practices occur from both the inside and outside of practitioners. Through the resistance and questioning of historically unquestioned habits and routines but also from the outside, as different practices interact with one another. By implication, changes in individual practices is a viable approach to a broader shift in sustainable consumption practices

as it begins the process of practitioners actively resisting the unsustainable practices and replacing them with more sustainable ones. However, the challenge is when a new practice comes into contact with existing ones, which may hinder the process toward sustainable consumption. It's at this point that it becomes clear that broader policy and infrastructure changes from the outside are also necessary to facilitate the adoption of alternative practices.

Influencing the microsystem as environmental action. Though engagement in the peer group supported an individual reduction in meat consumption, engagement in broader environmental action was limited in scope, and primarily centred around influencing others within the microsystem (i.e. influencing family, friends, colleagues, etc.; Bronfenbrenner, 1979; Neil & Christens, 2014; Neil & Neil, 2013). This result points to a number of theoretical implications. First, through the lens of Empowerment theory, this result suggests that engagement in the peer group may facilitate an empowering process (Hur, 2006; Lardier, 2019; Speer, 2000; Zimmerman, 1995; Zimmerman et al., 2018). Considering that participants felt as though they had the capacity to reduce their meat consumption from their involvement in the group, this indicates gaining some level of mastery, in that an increased sense of efficacy, competence and control regarding the meat reduction process developed. However, the empowerment process largely centred at this intrapersonal level and, for most participants, didn't necessarily extend to mobilizing the resources (i.e. interactive component) necessary to then enact broader change (i.e. behavioural component; Christens, 2012; Israel, Checkoway, Schulz, & Zimmerman, 1994; Speer, 2000; Zimmerman, 1995). From this lens, it may be the case that experiencing the more complex interactional and behavioural components are perhaps "next steps" that involve more continuous engagement for a greater length of time than the 6-weeks inherent in this study.

It is important to note however, that experiences of empowerment can differ for a number of reasons. First, though participants in this study come from a somewhat similar demographic and working context, they come from largely different backgrounds and experiences, which means that empowerment will take on different forms for different people (Foster-Fishman et al., 1998; Speer, 2000; Zimmerman, 1995). Second, and to a similar extent, coming from different organizations within the workspace context of evolution, empowerment will take a different form within the different contexts, and ultimately be fostered or hindered depending on the different opportunities within them (Foster-Fishman et al., 1998; Speer, 2000; Zimmerman, 1995). Thus, opportunity to act can influence whether someone begins to contemplate how to act, mobilize resources and consequently proceed to act. This is evident in the context of this research, as some participants engaged in broader environmental action within their organizations, while others did not. Moreover, although all participants come from the same physical office space, the space is still new and developing, which may have inhibited participants from critically thinking about opportunities for change when both physical and cultural development of the building is still underway. Thirdly, empowerment is dynamic and fluctuates over time. Thus, experiences of empowerment may be experienced to different extents at different times and may be experienced as a result of various factors. For example, some may feel empowerment due to exerting control over their own lives (i.e. reducing their own meat consumption), whereas others may experience empowerment due to exerting control over their organizational environment (i.e. influencing decision-making processes; Foster-Fishman et al., 1998; Speer, 2000; Zimmerman, 1995).

Though more notable environmental action was not necessarily taken as a result of engaging in the peer group, these results conversely highlight the powerful influence of the social context for creating change. Results from this study indicate that action broader than an

individual reduction in meat consumption primarily centred around influencing others within the micro system (i.e. colleagues, family, friends, etc.). This influence largely involved discussing some of the information learned in the group with others. Some participants noted that discussing their experience RMC made the practice more approachable to others within their outside social networks. One participant even stated that discussing their experience with someone in their network had influenced that person to reduce their consumption. This result contributes to previous research examining the relationship between social capital, social networks and engaging in pro-environmental behaviours (Hannibal & Vedlitz, 2018; Macias & Williams, 2016). Consistent with research in this area, findings from this study highlight the power that social relationships have on influencing individual behaviours and ideologies, and the role that social and discussion networks have for disseminating and acquiring information and resources (Hannibal & Vedlitz, 2018; Macias & Williams, 2016). Considering that the social context is a powerhouse for upholding traditional social norms, these results point to the idea that it may also lend itself well to creating a ripple effect of pro-environmental change via social networks and social ties (Long, Harré, & Atkinson, 2014).

Naturally emerging group processes. The participatory processes, such as the participant-driven group discussions, setting of goals and sharing of resources and experiences, unsurprisingly contributed to engagement in the meat reduction process. This result is consistent with current PAR literature and contributes to the idea that utilizing participatory approaches facilitates a process of self-determination (Dudgeon, Scrine, Cox, & Walker, 2017)—allowing for individual autonomy and agency to create change, or act, in ways that fit the needs of the individual rather than a top-down imposition of change for everyone (Baum, MacDougall, Smith, 2006; Dudgeon et al., 2017; Ryan & Deci, 2000). These results align with previous

research regarding self-determination and pro-environmental behaviour change, finding that autonomously motivated individuals are more likely to engage in a pro-environmental behaviour (Marshall, Hine, & East, 2016), especially if it is perceived as difficult (Aitken et al., 2016). Aligning with the basic tenets of SDT, participation in the peer group may have fostered the three psychological needs that support the development of self-determination: competence, autonomy, and relatedness (Darner, 2014). Each of these three needs, respectively, may have been fostered through a number of the participatory processes that occurred during the group: skill-building from group discussions and sharing of information and resources, centering the power of the individual participant for engaging in group processes that they wanted and that worked for them, and building relationships and developing a sense of belonging to a group of people going through a similar experience. However, it is important to note that inherent in the design of this study is the assumption that the individual already has an initial spark of intrinsic motivation (Ryan & Deci, 2000) to enact individual change regarding their meat consumption. These findings also highlight the effectiveness of bottom-up approaches to change, or allowing people the autonomy to create change themselves, rather than being changed, which align with well-known quote from systems scientist, Peter Senge (1991): “People don’t resist change. They resist being changed.”

Discussing, setting goals and sharing. Creating a space for natural discussions and the sharing of information and resources to take place was an important participatory process and pillar of the group in the context of this study. Engaging in these processes created an important dialogical space for the exploration of phenomena and also the acquisition of both factual and experiential knowledge regarding the meat reduction process. Previous research has examined the relationship between social capital, sharing of information and engagement in environmental

practices, and highlighted the important distinguishing factor between bonding ties and bridging ties during the sharing of information (Macias & Williams, 2016). While bonding ties are our closest relationships and lend themselves to being important sources of emotional support, when it comes to learning opportunities with the potential to engage in pro-environmentalism, bonding ties may provide redundant information. In contrast, bridging ties are with people to whom we're not as close with, and actually provide a greater diversity of information, connections and the ability to challenge our perspectives, as well as those of the status quo (Macias & Williams, 2016). The authors of this work explored the connection between various forms of social capital and pro-environmental behaviour, and concluded that social evenings with neighbors (a form of bridging ties) were strongly tied to engaging in environmental practices, hypothesizing that this connection may be due to the informal sharing of information and resources between these bridging ties (Macias & Williams, 2016). Thus, in addition to previous research examining the influential role of social and discussion networks, this research contributes to the idea that informal discussions and sharing of information and resources are a unique, under-appreciated and under-utilized tool for challenging traditional conceptions of consumption practices and influencing change.

Weekly setting of goals also became a pillar of the group structure, which may point to an interesting implication regarding this participatory process. Inherent in the act of setting goals is the measuring of performance in relation to a standard, which then influences the amount of effort that is exerted to achieve that goal (Becker, 1978). Previous literature on behaviour change has found goal setting to be a successful tool for encouraging a positive change in consumption practices, particularly energy consumption (see Abrahamse et al., 2007; Becker, 1978; McCalley & Midden, 2002; Riemer & Bickman, 2010). For example, previous studies have found that

setting a goal and receiving feedback about how well the goal is being performed jointly provides a motivational effect for achieving the goal (Becker, 1978). This is especially true for goals that are self-set (McCalley & Midden, 2002). Goal setting has also been found to be an effective behaviour change strategy when combined with public commitments (discussed further below; Abrahamse et al., 2007; Katsev & Johnson, 1983). What is especially interesting about this finding was that although the intent of this work was to be a more informal engagement approach, participants chose a route with a more formal feedback loop regarding their engagement. This finding may mean that people prefer structure with concrete indicators of progress, or feedback, when undergoing a change-making process to motivate their performance of that practice. This is consistent with previous literature regarding behaviour change and feedback loops finding that receiving feedback regarding engagement in a desired practice reinforces the performance of that practice (Carrico & Riemer, 2011; DeLeon & Fuqua, 1995; Kollmuss & Agyeman, 2002; Riemer & Bickman, 2010).

Change mechanisms. Feeling accountable to self and others, developing a sense of consciousness regarding topics related to reducing meat consumption, having an opportunity for learning to take place, and developing relationships and community with others in the group were notable factors from participating in the group that contributed to engagement in the meat reduction process.

Firstly, increased feelings of accountability to the self and to others in the group were prevalent when discussing engagement in the meat reduction process. Participants felt that one of the most important aspects of the group that contributed to their engagement in reducing their meat consumption was the feeling of accountability that they felt either to themselves or to others. Results from this study align with previous behaviour change research highlighting the

fundamental importance of accountability when encouraging performance of a desired practice. Previous research has noted that without accountability, feedback on performance will have little impact on motivated the continued performance of the practice (London, Smither & Adist, 1997; Riemer & Bickman, 2010). Similarly, these results also align with behaviour change research in the area of pro-environmental behaviour interventions, finding public commitments to engaging in a pro-environmental behaviour is a successful technique for promoting and following through with that behaviour (Deleon & Fuqua, 1995; Lokhorst, van Dijk, & Saats, 2009; Matthies, Klöckner, & Preibner, 2006). Since participants in this study publicly set their goals in front of their peers and subsequently created a process of accountability by checking in with the group regarding whether or not they achieved them, this public declaration of goal achievement may have contributed to the sense of accountability to self and others that was experienced and contributed to their sustained engagement in the meat reduction process and achievement of their goals

Having the opportunity to learn was also consistently cited as a contributing factor to engagement in the meat reduction process because without otherwise having an opportunity to acquire new and alternative knowledge participants perhaps wouldn't have engaged in the process to the extent that they did. Engagement in the group provided various types of opportunities for learning that suit each person differently based on where they were at and what they needed or wanted to learn. For example, a learning opportunity for one person may have consisted of gaining new factual knowledge (i.e. knowledge of issues) regarding the various environmental impacts of meat production, where to find locally and ethically sourced meat products, etc., or more procedural knowledge (i.e. skills) regarding how to cook nutritional meatless dishes. While previous literature states that knowledge does not necessarily lead to

behaviour change (Kollmuss & Agyeman, 2002; Nye & Hargreaves, 2009), it is also consistent with research highlighting that various levels of knowledge and skills are a necessary antecedent to engaging in alternative practices (Stoll-Kleeman & Schmidt, 2017). Lack of factual and procedural knowledge regarding meatless food has previously been identified as a perceived barrier regarding engagement with alternative pro-environmental practices. The acquisition of knowledge and skills in this study address what Stoll-Kleeman and Schmidt (2017) regard as a component of behaviour change that is “underestimated but should be taken very seriously” (p. 1266), as it overcame perceived barriers and increase perceived behavioural control. From the lens of social practice theory, having the necessary knowledge and skills are also essential for the performance and carrying out of a practice, as well as the ability to challenge, detach from, and remake new alternative practices (Hargreaves, 2011; Shove & Pantzar, 2005).

An increased consciousness regarding the issue at hand was a prevalent theme. So much so that even though levels of meat consumption generally increased after the weekly meeting ended, the level of consciousness remained relatively high. Most participant noted their consciousness on this issue as being prevalent during decision-making regarding food consumption practices. This is a particularly interesting finding because it exemplifies that while knowledge and awareness regarding an issue is an important first step toward creating a change or engaging in action (as previously highlighted), it doesn’t necessarily mean a change will be made, even when that awareness, or consciousness, is at the forefront of decision-making. This finding is consistent with previous literature finding that knowledge and awareness of an issue does not necessarily lead to a change in behaviour (Kollmuss & Agyeman, 2002), and in the case of this research, an increase in factual knowledge of an issue, procedural knowledge of a personal change in practice and consciousness of an issue does not necessarily lead to a sustained

change in behaviour, especially after no longer engaging in weekly group meetings. This finding may also speak to the earlier discussion on Social Practice Theory and the idea that if practices are unable to be consciously and collectively challenged, broken and replaced, the existing organization of practices that dominate will persist (Hargreaves, 2011). This again calls to question the responsibility of the “conscious” practitioner as bearing sole responsibility for challenging existing dominant practices and brings forth Warde’s (2005) idea that change occurs from both inside and outside the practitioner. From this view, perhaps a change in practice necessitates both the conscious and collective challenging of practices by practitioners as well as a broader change in societal infrastructure (i.e. changes in local policies) that intentionally facilitate the adoption, production, and re-production of alternative practices (Cohen & Ilieva, 2015; Ward, 2005). This aligns with the work of Cohen and Ilieva (2015) linking social practice theory to the multi-level perspective on transitioning the urban city food system towards sustainability. The authors explored a specific case study of food shopping practices in New York City following the implementation of a federal food benefit for low-income residents to be used at local farmers markets. From a practice-based perspective, this infrastructural change facilitated and encouraged a change in urban city food consumption practices. Through regular and repeated performance of this alternative practice, practitioners are able to consciously and/or unconsciously produce and reproduce a more sustainable food consumption practice and influence the food system. Cohen and Ilieva (2015) exemplify this relationship between practitioner and system while also highlighting the power of cities as smaller system parts and influencers of the larger food system.

The community/relationship-building aspect of the group significantly contributed to engagement in the meat reduction process. It was not only a contributing factor on its own but

was also attributed to influencing the other factors that contributed to engagement. For example, feeling accountable to peers in the group, feeling an increased sense of consciousness regarding RMC because of seeing others from the group throughout the workspace, and learning from the others in the group. These results further illuminate the importance of the social context, not only as central for the study of phenomena (Nye & Hargreaves, 2010), but also as a tool for change (Macias & Williams, 2016). Results from this study also highlight the influential role that peer education and support plays on an individual's engagement in change-making, especially with regard to changing a deeply socially engrained practice as meat consumption. These results fit with the findings from previous peer education and support studies (see DeVreede, Warner, & Pitter, 2014; Parkin & McKeganey, 2000; Wicks, 2017) exemplifying that such models are effective approaches to behaviour change, as well as engaging individuals in action (Hickman et al., 2016). From this perspective, seeing social others succeed in achieving a similar goal contributes to one's belief in their own capability to succeed in achieving that goal, increasing their perception of self-efficacy, which is strongly related to one's actual ability in achieving it (Bandura, 1977).

Conclusion

Engaging citizens in reducing their meat consumption is a promising approach for mitigating some of the climate and environmental impacts from unsustainable production practices of the food system. Broader system-level changes (e.g. production practices, policies, food subsidies) are needed. However, top-down change is slow (Stoll-Kleeman & Schmidt, 2017) and not necessarily the only or most efficient route to achieving desired pro-environmental impacts. Alternatively, research indicates that individual citizen-consumer change towards reducing meat consumption is a viable and efficient approach to mitigation (Springmann et al.,

2018a; Springmann et al., 2018b; Stoll-Kleeman & Schmidt, 2017; Willet et al., 2019). However, previous strategies to encourage an individual reduction in meat consumption have been limited. From the limited practical strategies that have been put in place, they have primarily centred around information campaigns, which rely on the rationalist assumption that once an individual is aware of the environmental issues associated with the food system, they will then change their behaviour accordingly. This model ignores contextual factors that influence meat consumption and conceptualizes consumption as a rational behaviour rather than a deeply engrained social practice.

The present study sought to address some of these limitations by encouraging a reduction in meat consumption at the building community-level in a multi-tenant green-certified office building in Waterloo, Ontario. The findings from this study suggest that utilizing a peer education/support approach to encouraging engagement in the meat reduction process within an inter-organizational office building setting is a promising tool for facilitating organization-level pro-environmental engagement. Apart from contributing to the current body of literature on pro-environmental behaviour change, engagement in sustainable practices, participatory action research, and peer education/support, these findings may have broader implications. In the following sections, the implications of this work will be more broadly discussed as both the strengths and limitations are considered, and how future work can draw upon the findings in the study in efforts to further encourage engagement in environmental action.

Limitations and Future Directions

Utilizing a qualitative research design in the context of this study was fruitful as it allowed for rich, detailed, and context-specific accounts of participants experiences in the project and their engagement with the meat reduction process that a quantitative design may not be able

to capture (Patton, 1990). Given the objectives of this project, the context-specificity of the building community-level was a valuable tool for testing this approach to encouraging engagement in RMC on a smaller scale and illuminate the opportunity for change at this level. With that being said, as with the strengths of any research design, it also comes with a set of limitations. The context-specificity of this project inherently means there is a limited generalizability to other contexts. While demographic patterns were not collected in this study, all participants came from a tenant organization within evolv1, meaning participants were generally of working age. This limits representation of people from other demographic backgrounds (i.e. low-income, student, etc.), as well as the ability to include the contextual influence of demographic patterns in the analysis. Moreover, the context of this research occurred in a new, state of the art, high-performance green building. The novelty of the new green building as well as other initiatives attempting to promote a culture of sustainability within the building occurring at a similar time as this study may have influenced participants level of engagement in the meat reduction process. Future research would benefit from investigating the implementation of a similar project in other contexts, such as building contexts with single tenant organizations, non-green buildings, schools, etc., and exploring how alternative contexts and demographic factors influence engagement in reducing meat consumption and further explore the role that these smaller-scale system levels can play in creating broader change.

Moreover, field notetaking was utilized as a data collection method to capture critical group processes that other forms of data collection may be unable to. This method was also utilized to ensure that the group meetings felt more informal than a traditional focus group. While this method was beneficial for the aforementioned purposes, it also presented a few limitations. As the researcher, I found it difficult to listen, contribute to conversation, and note-

take simultaneously. This limited the amount of data that I was able to collect. This method also introduces the potential for researcher bias, inadvertently recording data that aligns with the research questions. Future research should consider the implementation of other data collection methods, for example hiring a research assistant or someone unbiased by the work to take notes. Alternatively, a voice recorder may be considered for use in data collection, although this may impact the integrity of the group dynamic and relationship-building process by introducing a more research-focused dynamic rather than peer support dynamic. Thus, as with all research, careful attention should be paid to the data collection method chosen to ensure the most appropriate method to suit the objectives of the research.

In terms of the approach used, the participatory action approach to research that was employed in this project was essential to capturing such robust experiences, as the process of dialogue, reflection and action that is central to this approach allowed for the ability to build trust, relationship and community among the participants and myself (Langhout & Thomas, 2010). Relationship-building between the participants and myself as the researcher was central to this work and critical to encouraging the comfortability of the participants to take ownership of their engagement in the project. However, with emphasis on relationship between participants and the researcher comes the potential for social desirability or response bias. Although many participants noted feeling comfortable talking honestly about their engagement with reducing meat consumption, the potential for participants to distort or exaggerate their level of engagement with reducing meat consumption to align with others in the group or to answer the research questions exists. While this limitation is difficult to avoid in the research design utilized in this study, future research should take this into consideration and take the appropriate facilitation measures to ensure that honest and truthful responses from participants.

Keeping with a key element of participatory action research, grounding the power of the group proceedings with the participants (Kidd et al., 2018), I assumed a more “hands off” position in my role as the facilitator. While I provided direction to the group to stay on track with their chosen activities, in this capacity my role largely encompassed creating the space for and enabling them to explore sustainable food and the meat reduction process in their own way. The presence of the facilitator within this project was beneficial for providing light direction for the group and encouraging autonomy in the meat reduction process to more organically illuminate the participant-driven engagement processes that took place. Interestingly, within the context of this research, the organic change that took place predominantly remained at the individual level, which, again, begs the reflection of whether a change in facilitation style would warrant a different or broader outcome beyond individual change. Alternatively, a more structured hands on approach to facilitation may create more opportunity for thinking about broader collective change, although the relatively short timeline inherent in this project may not have been conducive to this process anyhow. The shorter timeline in this study was beneficial given the time-commitment required of participants and made the participant-driven approach feasible. However, a longer timeline may prove useful to facilitating engagement in broader environmental action that the shorter timeline in this study was unable to. Thus, perhaps these aspects of the group, with a hands-off facilitation style and short timeline, were not set up for change beyond the individual. Future research and/or future initiatives may consider an alternative facilitation style and timeline. A more structured facilitation style with a longer time commitment (e.g. 8-10 weeks) may create more space for thinking critically about consumption practices and opportunity for engaging in action beyond oneself. Future research utilizing similar methods may consider incorporating such changes to evaluate the differences in facilitation style

and longitudinal impacts of participating in the peer group on both individual-level and broader environmental action.

In consideration of the strengths and limitations of this work, this project was successful with encouraging engagement in reducing meat consumption at the individual level but may not have been set up to achieve the significant broader environmental action at the individual/building community-level that was originally intended. Future research and initiatives targeting this level for change should consider the strengths and limitations of this work in their design.

Implications

A prominent theme throughout this work is the tension between the individual versus the collective as the responsible change agents for addressing the environmental problems of the food system, and the degree to which change efforts at each of these levels is what is the necessary to do so. Real transformative change is necessary to address the shortcomings of the dominant food system, which calls for a reflection on this project's ability to address this broader change and the overall level of change that is necessary for future research and initiatives to consider.

In consideration of the findings of this work and previous work exploring potential mitigation strategies for this issue, I agree with the work of Cohen and Iliev (2015), finding smaller-to-mid system-levels (e.g. cities) as promising areas for creating opportunities for changing individual practices and food systems. These levels have the unique opportunity to address immediate needs with the introduction of infrastructural changes (i.e. policies or programs), which can ultimately change individual practices and impact how communities of people interact with the food system at this level. With that being said, I also believe change is

necessary at multiple, mutually influential levels of the system. In alignment with social practice theory, change occurs from both inside and outside the practitioner (Warde, 2005). While top-down change is necessary to build the infrastructure to engage and facilitate a change in practice, bottom-up change, a critical challenging of dominant practices and the socio-political environment that shape them and building competence to change are also necessary.

With this in mind, this project illuminates the opportunity for change-making at the individual/building community-level. Similar to cities, organizations have a unique opportunity to facilitate employee engagement in sustainable practices, as they have access to communities of people for lengthy periods of time. Implementation of a similar project at the organization or building-level may prove to be successful at reaching communities of people for building critical consciousness of sustainability issues and action competence for potential practice solutions. Future work may also consider infrastructural change (e.g. mandated policies) at the organization or building level to facilitate and complement a change in practices).

Moreover, this project highlights the power of learning from others and grounding agency to enact change at this level. Participants from this study responded positively to the components of peer support and education utilized in this study, suggesting that it was one of the more influential factors that contributed to their engagement in reducing meat consumption. This again highlights the value of creating change at this level, with communities of people. Future research and initiatives interested in facilitating engagement in sustainable food consumption practices may benefit from implementing a similar peer approach in consensus-building and building environmental action competence.

Ultimately, this work also attempted to contribute to the body of academic literature and groundwork in the community that is working toward a real societal shift toward sustainable

consumption practices. Real transformative change is necessary at both the individual and broader system levels, however I hope this work begins to illuminate the instrumental role that communities of people have in spurring this change.

Appendix A

Join us for a free

INFORMATION SESSION

**February 12th
12:00-1:00pm**

**UW "Make Change"
Classroom
Evolv1**

Please join us on February 12th at noon for a free information session about an exciting research project happening at evolv1!

A free sustainable lunch will be provided.

**Have you tried or
are thinking about
reducing your
meat consumption?**

**Are you interested
in getting to know
other people in
your building?**

LEARN about research taking place in the evolv1 building about reducing meat consumption and sustainable food consumption

GET INVOLVED in the research by signing up to participate in the study

For more info about the research project or information session, email spad9000@mylaurier.ca. To register, go to <https://evolv1infosession.eventbrite.ca>.

Appendix B

1. Do you currently eat meat?
 - ☐ Yes
 - ☐ No
 - ☐ Sometimes
2. In an average week, how many times do you eat meat? Insert # of times:

3. Have you ever considered reducing the amount of meat you consume?
 - ☐ Yes
 - ☐ No
4. If yes, for what reasons have you thought about reducing your meat consumption?
Choose all that apply.
 - ☐ Ethical treatment of animals
 - ☐ Environmental responsibility
 - ☐ Personal health reasons
 - ☐ Other reasons (please describe):

5. Do you currently engage in any actions (e.g., be a member of the green team) or personal practices (e.g., biking instead of taking the car) specifically because of environmental concerns?
 - ☐ Yes
 - ☐ No
6. If yes, please list up to ten.
 - ☐ _____
 - ☐ _____
 - ☐ _____
 - ☐ _____
 - ☐ _____
 - ☐ _____
7. Which of the following statements describes you best? Select one even if it is not a perfect description of you. We are aware that people prioritize different things in their lives and differ greatly in regard to their answers to this question. Thus, don't hesitate to be honest. That is more valuable to us than an answer you may think we want to hear.

- ☐ Consideration of sustainability plays an important role in my day-to-day decision making (e.g., what and where to shop, how to get to work/school, what news I read about)
 - ☐ I consider sustainability to be a relevant issue, but it currently plays only a moderate role in my day-to-day decision making
 - ☐ I seldom consider sustainability in my day-to-day decision making
 - ☐ I do not consider sustainability at all in my day-to-day decision making
8. To what extent are each of the barriers listed below, barriers for you towards engaging in sustainable practices in your daily life?

	1 = not at all	2	3	4	5 = very much
Economic and financial barriers	1	2	3	4	5
Not enough information on how to engage in sustainable actions or practices	1	2	3	4	5
Not enough resources (e.g. missing availability of sustainable food options)	1	2	3	4	5
Time constraints	1	2	3	4	5
Impracticability of some choices (e.g. biking to work would requiring showering there)	1	2	3	4	5
Lack of political environmental campaigns	1	2	3	4	5
Other, please specify:					

9. To what degree do you currently feel like you have the ability (e.g. knowledge, time, resources) to act in ways that are beneficial for the environment? Please select one:
- ☐ Greatly
 - ☐ To some degree
 - ☐ Not at all

10. If you feel comfortable, please elaborate on your chosen response.

11. Based on what you know about this project, what are you hoping to gain from being involved in this program?

12. What motivated you to sign up for the program?

13. Is there anything specific you would like to learn more about in terms of reducing meat consumption, sustainable food consumption, health, and sustainability?

14. Will you be available to meet weekly over lunch for 1.5 months (6 weeks)?

- ☐ Yes
- ☐ No
- ☐ Not sure yet

15. If yes, which day of the week would be preferable for you? Select all that apply:

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday

16. Are there any other topics related to sustainability and food that you would like to be covered?

17. Please insert your full name (this is necessary for the conduct of the study):

18. Please insert your email address (this is necessary to be contacted for the next part of the study):

Appendix C

Consent Form**Wilfrid Laurier University Informed Consent Statement – Pre-Recruitment Survey
REB #5860 Reducing Meat Consumption: A group exploration into understanding what it
takes to reduce the amount of meat you consume**

Principal Investigator: Brittany Spadafore, Wilfrid Laurier University

Supervisor: Dr. Manuel Riemer, Associate Professor, Wilfrid Laurier University

You are invited to participate in a research study. The purpose of this study is for you to engage in a process of reducing the amount of meat you consume and understand this experience as you go through it. The researcher is a Laurier graduate student in the Community Psychology program working under the supervision of Dr. Manuel Riemer.

Information

Participants will be asked to complete an online pre-recruitment assessment survey to determine eligibility for the study. From all participants who complete the pre-recruitment assessment survey, we will select a sample of 7-12 people to take part in a 6-week program focused on the importance of reducing meat consumption to alleviate the environmental impacts of industrial agriculture production. The survey will collect preliminary information to allow for a pre and post comparison of the research project. The survey will take approximately 5 minutes total and is recommended to be completed in one sitting. There is no compensation for participating in this short screening survey. All current and future building citizens who are 18+ years of age and currently eat meat are invited to participate. We anticipate that approximately 15 people will complete the survey.

Risks

There are minimal anticipated risks related to your participation in this study. You may experience fleeting moments of unease due to the self-reflective nature of the questions. You may feel a sense of obligation to participate in this study because it is occurring at your workplace. These feelings are normal and should only be temporary. You may choose to not participate or to withdraw from the study at any time without consequence or penalty. If you experience any persistent negative feelings as a result of participating in this study, please contact the researchers.

Benefits

The results from this study will advance the researchers' understanding of sustainability and food consumption. Participants will gain experiential knowledge in this research area and learn of ways to reduce their meat consumption and/or engage in more sustainable meat consumption. The research will contribute to the body of literature/knowledge on food systems, meat consumption, and sustainability.

Confidentiality

All necessary measures will be taken to ensure your data from this study remain confidential. Only Brittany Spadafore and Dr. Manuel Riemer will have access to the data collected during

this study. Please note that confidentiality of data cannot be guaranteed while in transmission over the internet. The researchers acknowledge that the host of the online survey (Qualtrics) may automatically collect participant data without their knowledge (i.e., IP addresses); however, the researchers will not use or save this information. The electronic data will be securely stored on a password-protected network drive at Wilfrid Laurier University. You will be asked to provide your name and contact information so that we can invite you to participate in the 8-week program. If you do not participate in the program, your contact information and data will be destroyed within 2 weeks (i.e., by November 30th, 2018). If you do participate in the 8-week program, your contact information will be maintained, separate from your data, until April 30, 2019. In addition, the data from the pre-recruitment assessment survey will be linked to the data collected during the program with a research code, and then the de-identified data will be stored indefinitely. These data may be reanalyzed in the future as part of a separate project (i.e., secondary data analysis), and may be provided to other authorized researchers in Dr. Manuel Riemer's lab for this purpose. Your identity will remain anonymous in any reporting of the findings.

Contact

If you have questions at any time about the study or the procedures, or you experience adverse effects as a result of participating in this study, you may contact the researcher, Brittany Spadafore, at spad9000@mylaurier.ca or her supervisor, Dr. Manuel Riemer, at mrriemer@wlu.ca.

This project has been reviewed and approved by the University Research Ethics Board (REB#5860), which receives funding from the Research Support Fund. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Jayne Kalmar, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131 or REBChair@wlu.ca.

Participation

Your participation in this study is voluntary; you may decline to participate without penalty. Your decision to participate will not impact your job or relationship with the organization with which you are involved/employed. If you decide to participate, you may withdraw from the study at any time without penalty. You have the right to refuse to answer any question. If you actively withdraw from the study by informing the researchers, every attempt will be made to remove your data from the study. You can request to have your data removed/destroyed until April 30, 2019.

Feedback and Publication

The results of this research will be presented and/or published in a thesis, journal article, conference presentation, or class presentation. The results of this research may be made available through Open Access resources. The key findings of the study may also be presented or posted around the evolvl building. A community report presenting the key findings will be provided to participants via email by May 31, 2019.

Consent

(Please check the appropriate box)

- ☐ I have read and understand the above information. I agree to participate in the pre-recruitment assessment survey [[click here to begin study](#)].
- ☐ I have read and understand the above information, I do not want to participate in the pre-recruitment assessment survey [[click here to exit](#)].

We recommend that you print or save a copy of this form for your records.

Appendix D

Peer Group Consent Form**Wilfrid Laurier University Informed Consent Statement – 6-week program
Reducing Meat Consumption: A group exploration into understanding what it takes to
reduce the amount of meat you consume**

Principal Investigator: Brittany Spadafore, Wilfrid Laurier University
Supervisor: Dr. Manuel Riemer, Associate Professor, Wilfrid Laurier University

You are invited to participate in a research study. The purpose of this study is for you to engage in a process of reducing the amount of meat you consume and understand this experience as you go through it. The researcher is a Laurier graduate student in the Community Psychology program working under the supervision of Dr. Manuel Riemer.

Information

Participants will be asked to engage in a process of reducing their meat consumption over a 6-week period.

Once a week, participants will be asked to attend a 1-hour group meeting during lunch (or regular business hours) at the evolvl building. The researcher will take field notes during the group meetings. At the end of the 6-week program, participants will be asked to attend a 2-hour focus group to discuss, reflect and explore this process. The focus group will be audio recorded. Participants will also be asked to complete a short (5-10 minutes), online post-group assessment survey similar to the pre-recruitment assessment survey to allow for pre and post group comparisons. The study will take approximately 8 hours total over a span of 3.5 months to complete.

In order to participate in this study, you will need to attend most of the 6 weekly meetings, as well as the focus group. Your recruitment will be determined based on your anticipated ability to attend most of the weekly meetings and how well your expected schedule, as indicated in the pre-recruitment assessment, aligns with those of other potential participants to ensure maximum participation and attendance in as many weekly sessions as possible. However, it is important to note that there will be no repercussions if you miss more than 2 of the weekly sessions due to extenuating circumstances. We anticipate that approximately 7-12 participants will take part in this study. Eligible participants are current and future evolvl building citizens who are 18+ years of age, who have completed the pre-recruitment assessment survey, and who currently eat meat.

Please note that the researchers may use participants' de-identified quotations from the weekly sessions, focus group and surveys in presentations and publications that result from this research. The focus group will serve as a member-checking process; however, the use of participants' de-identified quotations is a mandatory component of this study.

Risks

There are minimal anticipated risks related to your participation in this study. You may experience a disruption to your regular food consumption practices, rituals and patterns. You

may also experience a sense of guilt or loss in self-confidence if you do not attain your desired outcome. These feelings are normal and should only be temporary. It is important to note that your engagement with reducing meat consumption is the goal, but this outcome is NOT mandatory. Peer group support and support from the researcher will be used as a safeguard against any disruption or feelings of discomfort. Participants will also be asked to not discuss anything shared in the weekly meetings and focus group outside of these sessions. By participating in this study, you agree to keep the shared information confidential and to respect the ground rules that will be established at the beginning of the research process.

You may feel a sense of obligation to participate in this study because it is occurring at your workplace. You are free to discontinue the study at any time. The researchers' affiliation with the evolvl building and the tenants in it may influence participants' willingness to participate or not in the project, disclose information or provide data in support of the anticipated outcomes of the research. It is important to note that your participation in this project or not will not impact your reputation or standing at your workplace, the information you choose to disclose will remain anonymous, and your accuracy in sharing information is of greater value than providing information in support of the anticipated research outcomes.

If you experience any persistent negative feelings as a result of participating in this study, please contact the researchers.

Benefits

The results from this study will advance the researchers' understanding of sustainability and food consumption. By participating in this study, participants may also benefit from gaining valuable insight into the participatory research process and the relevant academic knowledge on this research area. You will also gain experiential knowledge in reducing meat consumption. The research will contribute to the body of literature/knowledge on food systems, meat consumption, and sustainability.

Confidentiality

All necessary measures will be taken to ensure your data from this study remain confidential. Only Brittany Spadafore and Dr. Manuel Riemer will have access to the data collected during this study. Confidentiality cannot be guaranteed in a group setting. Participants of this study are asked to keep the information shared in the group meetings confidential and to not share this information with anyone outside of the groups. Your identity will be known to the researcher during the study but will remain anonymous in any reporting of the findings. To maintain anonymity, any personal identifiers on the assessments and field notes will be removed and replaced with a pseudonym. For the post-group assessment survey, please note that confidentiality of data cannot be guaranteed while in transmission over the internet. The researchers acknowledge that the host of the online survey (Qualtrics) may automatically collect participant data without their knowledge (i.e., IP addresses); however, the researchers will not use or save this information. Physical data, including consent forms, will be securely stored in a locked cabinet in a locked office at Wilfrid Laurier University. Electronic data will be securely stored on a password-protected network drive. Your contact information will be maintained, separate from your data, until April 30, 2019. All data collected during this study will be linked with a research code, and will then be de-identified and stored indefinitely. The de-identified

data may be reanalyzed in the future as part of a separate project (i.e., secondary data analysis), and may be provided to other authorized researchers in Dr. Manuel Riemer's lab for this purpose.

Contact

If you have questions at any time about the study or the procedures, or you experience adverse effects as a result of participating in this study, you may contact the researcher, Brittany Spadafore, at spad9000@mylaurier.ca or her supervisor, Dr. Manuel Riemer, at mriemer@wlu.ca.

This project has been reviewed and approved by the University Research Ethics Board (REB#5860), which receives funding from the Research Support Fund. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Jayne Kalmar, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 3131 or REBChair@wlu.ca.

Participation

Your participation in this study is voluntary; you may decline to participate without penalty. Your decision to participate will not impact your job or relationship with the organization with which you are involved/employed. If you decide to participate, you may withdraw from the study at any time without penalty. You have the right to refuse to answer any question.

If you actively withdraw from the study by informing the researchers, every attempt will be made to remove your data from the study. You can request to have your data removed/destroyed until April 30, 2019. Please note that there is no compensation being offered for participating in this study.

Feedback and Publication

The results of this research will be presented and/or published in a thesis, journal article, conference presentation, or class presentation. The results of this research may be made available through Open Access resources. The key findings of the study may also be presented or posted around the evol1 building. A community report presenting the key findings will be provided to participants via email by May 31, 2019.

Consent

I have read and understand the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

Appendix E

Group attendance per session

<u>Session</u>	<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>P4</u>	<u>P5</u>	<u>P6</u>	<u>P7</u>	<u>Total</u>
1	✓	✓			✓	✓	✓	5
2	✓	✓	✓		✓		✓	5
3	✓	✓		✓	✓		✓	5
4	✓	✓	✓	✓	✓	✓	✓	7
5	✓	✓		✓		✓	✓	5
6	✓		✓				✓	3
Total	6	5	3	3	4	3	6	

Appendix F

Post-Group Assessment**Reducing Meat Consumption: A group exploration into understanding what it takes to reduce the amount of meat you consume (REB #5860)**

Thank you for participating in this study. The first 9 questions of the post-group assessment survey will directly resemble some of the questions on the pre-recruitment assessment survey you completed prior to beginning the peer group lunches. This is to serve as a comparison to how you answered these questions prior to beginning the study.

Questions 10 to 15 will ask you to reflect on the project and the peer groups, and ask for you to share how your involvement has impacted you and your engagement in reducing your meat consumption. Please give yourself some time to answer these questions to the best of your ability and include anything that comes to mind.

1. Do you currently eat meat?
 - ☐ Yes
 - ☐ No
 - ☐ Sometimes

2. In an average week, how many times do you eat meat? Insert # of times:

3. Have you ever considered reducing the amount of meat you consume?
 - ☐ Yes
 - ☐ No

4. If yes, for what reasons have you thought about reducing your meat consumption?
Choose all that apply.
 - ☐ Ethical treatment of animals
 - ☐ Environmental responsibility
 - ☐ Personal health reasons
 - ☐ Other reasons (please describe):

5. Do you currently engage in any actions (e.g., be a member of the green team) or personal practices (e.g., biking instead of taking the car) specifically because of environmental concerns?
 - ☐ Yes
 - ☐ No

6. If yes, please list up to ten.

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

7. Which of the following statements describes you best? Select one even if it is not a perfect description of you. We are aware that people prioritize different things in their lives and differ greatly in regard to their answers to this question. Thus, don't hesitate to be honest. That is more valuable to us than an answer you may think we want to hear.

- ☐ Consideration of sustainability plays an important role in my day-to-day decision making (e.g., what and where to shop, how to get to work/school, what news I read about)
- ☐ I consider sustainability to be a relevant issue, but it currently plays only a moderate role in my day-to-day decision making
- ☐ I seldom consider sustainability in my day-to-day decision making
- ☐ I do not consider sustainability at all in my day-to-day decision making

8. To what extent are each of the barriers listed below, barriers for you towards engaging in sustainable practices in your daily life?

	1 = not at all	2	3	4	5 = very much
Economic and financial barriers	1	2	3	4	5
Not enough information on how to engage in sustainable actions or practices	1	2	3	4	5
Not enough resources (e.g. missing availability of sustainable food options)	1	2	3	4	5
Time constraints	1	2	3	4	5
Impracticability of some choices (e.g. biking to work)	1	2	3	4	5

would requiring showering there)					
Lack of political environmental campaigns	1	2	3	4	5
Other, please specify:					

9. To what degree do you currently feel like you have the ability (e.g. knowledge, time, resources) to act in ways that are beneficial for the environment? Please select one:

- ☐ Greatly
- ☐ To some degree
- ☐ Not at all
- ☐ If you feel comfortable, please elaborate on why: _____

10. Do you feel that your involvement in the peer groups influenced your engagement in reducing your meat consumption?

- ☐ Yes
- ☐ No
- ☐ A little
- ☐ If you feel comfortable, please elaborate on why: _____

11. Do you feel that your involvement in the peer groups influenced your engagement in other sustainable actions or behaviours?

- ☐ Yes
- ☐ No
- ☐ A little
- ☐ If you feel comfortable, please elaborate on why: _____

12. What are some of the things you feel you have taken away from being involved in this project?

13. What aspects of the peer groups in general do you feel contributed most to your engagement in reducing meat consumption? Try to be as specific as possible.

14. What aspects of the research project specifically do you feel contributed most to your engagement in reducing meat consumption? This can speak to the research design and methods used in this study.

15. If you feel comfortable, please elaborate on your final thoughts, feelings, reflections, etc., of the group meetings and the overall project? Feel free to comment on both positive and negative aspects.

Thank you for completing the Post-Group Assessment Survey. We will be in contact with you shortly to schedule a follow-up focus group.

Appendix G

Focus Group Protocol & Preliminary Themes

Thank you for agreeing to participate in this focus group. The purpose of this research is to look at how engaging in our meat reduction peer groups has influenced your engagement with reducing your meat consumption and other environmental actions. Now that we've gone through 6 weeks of our peer group meetings, I'm interested in hearing your insights regarding this experience, and how it has influenced you and your meat consumption. This reflective opportunity will provide an important supplement to what has already been discussed in our meetings.

This focus group will be recorded in order to transcribe it to text. Feel free to ask me any questions that might arise during the interview. We can also pause the recording if you would like to clarify anything off the record. This conversation is not meant to be stressful. There are no right or wrong answers. If you want me to repeat or reword any questions just let me know. You can also elect not to answer any of the questions. And lastly, please answer all questions honestly.

Because this is a focus group, rather than a one-on-one interview, it is vital that we respect each other's contributions, both during and after the session.

I have created this agreement that I'll ask everyone to sign showing that you agree to six principles.

[Pass around the sheet]. These principles are:

1. Only one person speaks at a time
2. We must all protect each other's privacy and confidentiality - What is shared in the room stays in the room
3. There are no right or wrong answers to questions, just ideas, experiences, and opinions, which are all valuable and must be treated with respect
4. If you disagree with someone you are welcome to share your thoughts with the group in a respectful manner
5. It is important to hear all sides of an issue - both the positive and negative
6. It is important to hear all sides of an issue - from men and women, Canadians and non-Canadians, younger and older, etc.

Do you have any questions or comments before I start recording?

[Wait for response and respond to any questions]

I'm going to turn on the recorder now.

[Turn on recorder]

Please clearly state your name before responding to the questions. This will allow me to link your answers throughout the focus group. In the transcript, your name will be replaced with a pseudonym.

1. [Check in]

Let's start with a check in about this last month. **Since our last session, or the last session you attended, did you set yourself a goal to meet by our session today? If so, what was this goal and to what degree did you accomplish it?** Considering we're all well-aware that we can spend a lot of time checking in, let's try to keep these brief so that there's enough time for my other questions.

2. [Research Question #1: Result in a reduction in meat consumption]

You may have already touched on this a little bit talking about goal setting, but now that it's been just over a month since our last group meeting, **how does your meat consumption during this past month compare to your meat consumption while in the group? And then, how does it compare to your meat consumption before the group meetings started?**

PROMPTS

- i. **Thinking about these differences in your meat consumption, did any aspects of the group influence your engagement with it during these different time periods?**
- ii. Did you try something new or different to reduce your meat consumption?

3. [Research Question #1: Result in a reduction in meat consumption]

Now, reflecting on your level of meat consumption specifically during the 6-week period that we held the group meetings,

- I. **To what extent do you think your engagement in the group resulted in you reducing your meat consumption during that time?** Please answer honestly.

PROMPTS

- i. Are there other factors that may have played a role in your level of engagement?
- ii. If not reduction in meat consumption, to what extent do you think your involvement in the group has resulted in overall engagement with this topic?

Now reflecting on your current level of meat consumption one month following the end of the group,

- II. **To what extent do you think your engagement in the group has resulted in a continued reduction in meat consumption?** Please answer honestly.

PROMPTS

- i. If not reduction in meat consumption, to what extent do you think your involvement in the group has resulted in continued engagement with this topic?
 - ii. Has it influenced your motivations or intentions for the future? Or maybe future goals?
- 4. [Research Question #1b: Impact on participants' environmental action related to meat consumption]

We've been talking a lot about our own individual levels of meat consumption; however, maybe your participation in the group has impacted you in other ways above and beyond just your meat consumption, such as taking other actions for the environment. **Did you experience that your involvement in the group had an impact on your engagement in other environmental actions?** These can be things related to reducing meat consumption, such as influencing others around you to reduce their meat consumption, advocating for meatless catered lunches, encouraging your workplace to reduce their meat consumption, etc. Or in other environmental actions, not specifically related to reducing meat consumption.

- 5. [Research Question #2: What aspects of the peer support group contributed most to engagement in the meat consumption reduction process?]

The group structure was left fairly open-ended and up to the discretion of the group, so that we could decide what our format would be together. It took on a sort of “peer support” and “peer education” format, which is often popular in the field of mental health and addictions. **How did you feel about this format?**

Thinking about the group format and the structure that naturally came to be, **what aspects of the peer group do you think contributed most to your engagement in the meat reduction process?** These can be specific things that we did or talked about, characteristics of the group, or things that your involvement in the group led to.

PROMPTS

- i. Sharing (knowledge, experiences, food)
 - ii. Discussing (nutrition, environmental impacts)
 - iii. Setting goals (individualized goals)
- iv. Small
 - v. Unstructured
 - vi. Informal
 - vii. Group format
- viii. Feeling support
 - ix. Accountability
 - x. Consciousness-raising
 - xi. Learning

[SHARE PRELIMINARY FINDINGS]

Preliminary Findings**Research Purpose**

Put forth an alternative and more holistic approach to encouraging a reduction in meat consumption.

Research Questions

1. To what extent does engagement in a meat reduction peer support group result in a reduction in meat consumption?
 - a. To what extent does it have an impact on individual meat consumption?
 - b. To what extent does it have an impact on participants' environmental action related to meat consumption?
2. What aspects of the peer support group contributed most to engagement in the meat consumption reduction process?

Data

The data that has been collected and analyzed come from your responses to the pre-recruitment assessment, notes taken during our weekly meetings, and the post-group assessment.

Preliminary Qualitative Analysis*Coding*

Three cycles of coding: (1) initial coding, (2) process coding, (3) descriptive coding

Themeing

From these coding cycles, main themes were developed, defined, re-defined, grouped together, and reviewed. Based on the data collected thus far, the main themes that have been developed primarily highlight the (1) group characteristics, (2) group processes, and (3) outcomes that led to your engagement in reducing your meat consumption.

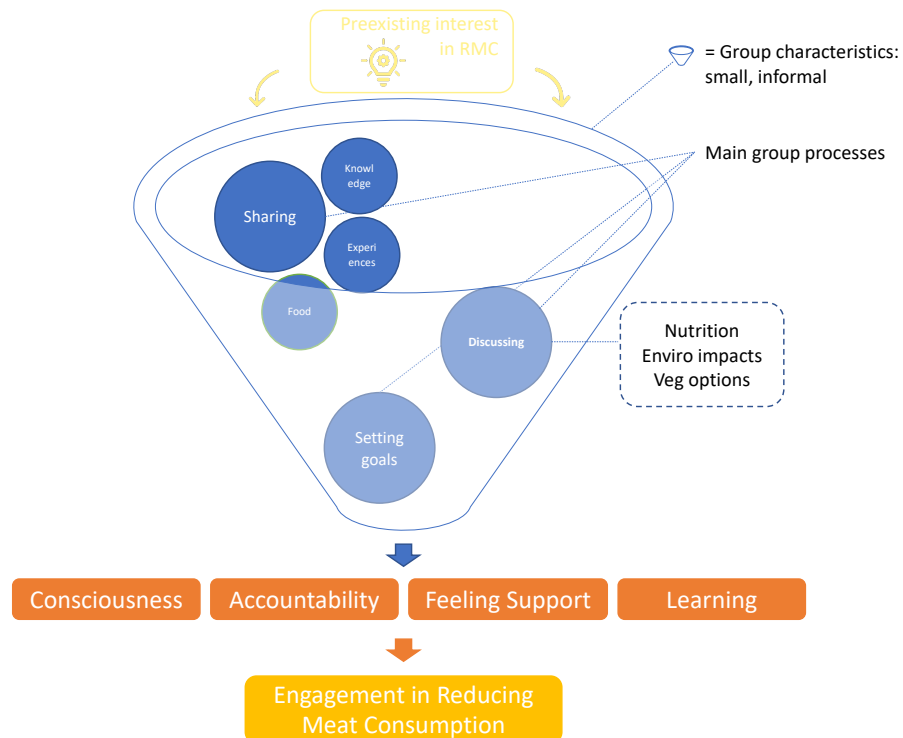
(1) Group characteristics:

- a. Small group
- b. Informal

(2) Group processes:

- a. Sharing
 - i. Knowledge
 1. Veg options
 2. Resources
 3. Nutrition
 - ii. Experiences
 1. Facilitators to reducing meat consumption
 - a. Planning ahead, setting goals, family/partners, the group
 2. Barriers to reducing meat consumption

- a. Inability to plan ahead, family/partners, lack of veg options, lack of time/busy
 - iii. Food
 - b. Discussing
 - i. Nutrition
 - ii. Environmental impacts
 - iii. Veg options
 - c. Setting goals
 - i. Setting goals publicly
 - ii. Individualized, SMART and modifiable goals
 - iii. Checking in about goals
- (3) Outcome:
- a. Accountability-inducing
 - b. Consciousness-raising
 - c. Learning
 - d. Feeling supported



6. **Thinking about these themes and what we've talked about so far, have I missed anything important? Is there anything else that would be good to mention or explore that pertains to your experience in the groups and reducing your meat consumption?**

Thanks again for meeting with me. I'll turn off the recorder now.
[Turn off the recorder]

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